

# AMERICAN CINEMATOGRAPHER

A Technical and Educational publication  
of motion picture photography

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# Here's what the Experts Say about FILMO

•The American Society of Cinematographers, Hollywood, has placed its stamp of approval upon the Filmo 70-D Personal Movie Camera in exacting tests and operating experiments, thus 16 mm. Filmo came through with flying colors.

It was not surprising that this body of cinema specialists should find the Filmo living up to every claim made for it. For the world in general long ago gave the palm to Filmo precision and Filmo performance. Filmos, since the beginnings of personal movie making, have performed as constantly and as dependably as their big Bell & Howell brothers in the world's leading professional studios.



# OK.

## Here's why FILMO 70-D is the camera for you

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•Filmo 70-D—master of all present movie making. —16 mm. 3-lens turret, Cooke 3-inch F: 3 lens, 1/25 sec. and up, 8 frame locked Mayflex Gate

# BELL & HOWELL FILMO

**Personal Movie Cameras and Projectors**

Bell & Howell Co., 1841 Larchmont Ave., Chicago, 766 North La Brea Ave., Hollywood, New York, London, (B & H Co., Ltd.) Est. 1907.

PROFESSIONAL RESULTS WITH AMATEUR EASE

## Editorial

# Testing Committee Rejects Inferior Equipment

**D**URING its three months of testing, many pieces of equipment have been submitted to the committee of the American Society of Cinematographers. While several items have been found worthy of their stamp of approval others have been rejected.

Where this service has proved of inestimable worth to the manufacturer is in the case of a piece of equipment in its first model that has seemed to meet all of the requirements of the Cinematographer, but under the careful scrutiny of this committee with their very intimate knowledge of studio conditions has been found wanting in the final analysis in spite of the fact that mechanically the equipment might be considered a perfect achievement.

In several instances, in the past several months, apparatus has been submitted to the Society after other organizations have given it their approval only to find that in the final acid test of the Cinematographer's requirements it could not pass every condition that is familiar to the cameraman only.

These other tests had led the manufacturer to believe he had a marketable product. He planned to go forward on a big scale in the manufacture of this item, but realized that the fair report given him by the Testing Committee of the American Society of Cinematographers showed the product still lacked some essential refinements to make it meet the present day studio conditions. The recommendations given by this com-

mittee were fundamental; in some instances requiring a basic change, in others calling for only a minor change or adjustment that would bring the article up to standard.

It is found this is eliminating much waste in both the studios and plants of the manufacturer. Studio executives may be induced to make purchases because of recommendations made by those who have not the basic knowledge and wide experience of the Cinematographer only to find that the article bought will not fully meet the requirements of the cameraman. These purchases have encouraged the manufacturer to go into the making of the article on an ambitious scale only to discover that his product is not marketable.

Because of this constructive move on the part of the American Society of Cinematographers studios are consulting the testing committee before purchasing new and untried equipment. In the case of the 16 mm. industry the tendency on the part of the dealer is also leaning in that direction.

While some may feel that the withholding of an approval by the society on a product which others have passed upon as being suitable for use, is a hardship, still, the more progressive and constructive manufacturers and distributors realize that this action will mean less servicing and less trouble in the long run. The use of an inferior article usually gives it a reputation that generally takes years to live down and the improved and approved model must overcome all of the prejudices of the inferior predecessor.

This service of the American Society of Cinematographers has been given freely to the industry and to the manufacturer as a constructive and progressive move in the improving of the craft and art of the Cameraman.



Drawing by  
Glen R. Kershner, A.S.C.

## FOURTEEN YEARS

Dedicating its efforts to the advancement of the science and art of Cinematography the American Society of Cinematographers launches into its fourteenth year. Its achievements during those years are a matter of history—they are the milestones of the great strides made in cinematography—achievements that have established this body of men as the greatest in their profession, and today the words of Dr. Kenneth Mees, spoken in December 1927, are fully as truthful, fully as descriptive as when he said, "You gentlemen here are known throughout the world without any dispute or question as the greatest exponents of the art of photography. There is no question about it—the cameramen of Hollywood are the greatest known in the art of Cinematography—in that field you are supreme."

# A. S. C. Re-Elects John Arnold for Third Term

**A**T a meeting held in the Society's offices on the evening of April 3d, 1933, the members of the American Society of Cinematographers elected a new Board of Governors, consisting of John Arnold, John W. Boyle, Daniel B. Clark, Charles G. Clarke, Elmer G. Dyer, Frank B. Good, Alfred Gilks, Fred W. Jackman, Charles B. Lang, Jr., Arthur Miller, Victor Milner, Hal Mohr, George Schneidermann, John F. Seitz, and William Stull.

The officers elected to guide the Society through the coming year are headed by John Arnold, who was unanimously re-elected President for the third successive term. Victor Milner was elected First Vice-President, having served several terms in this office previously. Charles G. Clarke was elected Second Vice-President. Elmer G. Dyer was re-elected Third Vice-President. George Schneidermann was returned for his third successive term as Treasurer, and William Stull was re-elected Secretary of the organization for his fourth successive term.

President Arnold's platform for the coming year, as outlined in his inaugural address before the members at the annual installation banquet, at the Bel-Air Country Club, sponsored by E. O. Blackburn of J. E. Brulatter, Inc., was a pledge to continue his efforts of the past two years. "Now is no time," he said, "to make fine-sounding promises—which future events may render impossible of fulfillment. Instead, I promise to bend every effort toward furthering cinematographers, cinematography, and the American Society of Cinematographers. From every viewpoint, we have reason to be proud of our organization and its members; we have weathered a period of storm and strife, not alone in our own industry, but in the entire world. To date, we have emerged unscathed; and while none of us can foretell what is coming, every sign indicates that we have at last put the worst behind us. Our present efforts must be bent toward keeping our organization on its upward path, and doing our bit in advancing the recovery of the industry. The accomplishments of the American Society of Cinematographers and of its individual members during this trying period have been noteworthy—especially the enlargement of the scope of the Society's Research Committee, the inauguration of the Society's policy of testing and approving cinematographic equipment, both professional and amateur, and in bringing to the attention of American cinematographers the newest ideas in both equipment and methods from all over the world. The progress of our journal, the *American Cinematographer*, under its new Editorial head is also highly gratifying, it is steadily increasing its value as a service to all cinematographers, professional and amateur alike, throughout the world. But our progress in the past, noteworthy as it may have been, can be but the foundation of future accomplishment. What is already done is inescapably leading us to greater things: greater achievements in the Art and Science of cinematography—a closer cooperation between cinematographers and

John Arnold  
President  
A.S.C.



branches of the industry—a keener general appreciation of the cinematographer and his work—and better times in general."

At the first meeting of the new Board, President Arnold announced the appointment of the following committees:

**PUBLIC RELATIONS COMMITTEE** John Arnold, ex-officio chairman; Harford T. Gowling, of Rochester, N. Y.; Frank Zucker, of New York City; Edwin L. Dyer, of Detroit; Charles Bell, of Minneapolis; Charles W. Herbert; Charles J. Davis; Mack Stangler; Paul H. Allen; Ross Fisher, of Mexico City, Mexico; Georges Benoit, of Paris; John Dared, of Paris and Riga; Glenn MacWilliams, of London; Philip M. Chancellor, F.R.G.S., Ariel Vargas, of Tokio; W. H. Jansen, of Shanghai, China; and Max B. DuPont, of Papete, Tahiti.

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The new Fox Film Company camera carriage. At top used 26 inches from the ground. At bottom used at a height of six feet, six inches.

## New Camera-Carriage Saves Time

by

John F. Seitz, A.S.C.

THE new mobile camera-carriage recently developed by the engineering department of the Fox Film Corporation, and now in use at the Fox Hollywood and Westwood studios, promises to prove one of the greatest aids to

fast, economical production introduced in a long time. While its primary purpose is, of course, facilitating the making of travelling shots, it has proved equally valuable as a means of saving time and effort in changing camera set-ups. The new device combines the functions of crane, perambulator and tripod, as it allows the camera to be placed instantly in any position from 26 inches above the floor up to 6 feet 6 inches high, moreover, in any of these positions the device is sufficiently rigid to obviate any necessity for a conventional tripod.

In appearance, this new device, which is the design of Grover Latta, comprises a low chassis of cast aluminum, surmounted by a six-foot crane arm, also of cast aluminum, and running on four small wheels with solid-rubber tires. The camera is mounted on a standard blimp-type friction pin-and-tilt head placed at the end of this arm; this head is maintained in equilibrium by a pivot-mounting and a radius-rod of conventional design. The crane-arm is raised or lowered by two short arms pivoted to it approximately two feet from the fulcrum, with their lower ends threaded and fitted on to a pair of worm-gears which lie horizontally along the low chassis. These two screws are in the present, experimental model, operated by a hand-wheel placed low at the right-hand side of the device; but in the several production-models now under construction, they will be driven by a silent electric motor. The hoist-arm is counterbalanced by two powerful helical springs mounted in the chassis, so that little effort is required to raise or lower the camera, while the crane is, in any position, perfectly stable.

As will be seen from the illustrations, a removable seat is provided on the crane-arm for the use of the operative cinematographer when the crane is in the lower and medial positions, while removable running-boards can be attached to the sides of the chassis for making travelling-shots with the camera at higher elevations.

The device is intended to furnish horizontal and vertical movement, while the tilthead produced any necessary panoramic or tilting motion. In addition, the rear wheels are so designed that they can be turned parallel to each other, enabling the device to be rotated about the front wheels, thus revolving the camera about its own axis. The tongue by which the carriage is pushed or pulled is fixed to the steering-handle, and can be removed when not in use. In the production models, tie-off feet will be provided, so that the device can be rigidly braced when it is used in place of a conventional tripod.

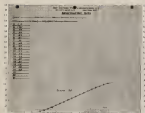
The remarkably small size and weight of the device are important factors in its utility. It is remarkably compact, being but thirty inches wide and five feet five inches long. As has already been said, it gives a range of camera-heights (from-center measurements) of from 26 inches to six feet six inches. Being made entirely of duralumin, it is exceptionally light, weighing but three hundred pounds; less than half the weight of comparable devices of earlier design.

In actual practice, it is extremely difficult to say whether the device's greatest utility lies in its application to travelling shots, or to its convenience as a substitute for ordinary tripods. In the former use, it meets the demands of practically all types of scenes ordinarily encountered, with a few rare exceptions which demand the use of a larger crane. In addition, it is compact enough to be used freely on even very small sets. Due to the narrow width, it will easily pass through any door. The action is smooth and easily controllable, while by virtue of its light weight it does not demand excessive additions to the stage-crew.

When used as a substitute for conventional tripods, the

Continued on Page 35





This graph shows a gamma of .45 obtained by using a .003" and .0006" lines of light in combination width.

## Optical Twin Fidelity With Glow Lamp

by

Hartley Harrison

**N**OT since 1890, when Edgar Friets patented a means of recording and reproducing sound vibrations, has there been anything new in the principle of the light beams for the recording or reproducing of sound.

The accepted practice has been to create as fine a line of light as possible not only for both recording and reproducing, but also for both variable density and variable area recording. The theory being that the narrower the width of the beam the higher the frequency response, and of course, the better the quality.

It should therefore be of considerable interest in the realm of sound when some different principle, namely the use of two lines of light, is employed in the recording of sound. But, before going into a description of the two line principle let us re-familiarize ourselves with some of the optical conditions of sound recording.

Although theoretically the width of the line of light determines the frequency response of the optical system, in actual practice, the character of the width of the line, such as sharpness of edge, uniformity of light across the width is so powerful a factor in controlling the frequency response that the width of the line is of secondary importance.

This has been demonstrated by using a .0006" line of light whose edges were very sharp and the intensity of the light across the width very uniform compared with a .0006" line of light whose edges were not sharp and a varying in-

tensity across width. With the sharp uniform line the frequency response was 25,000 cycles contrasted with a frequency response of only 9,000 cycles for the line whose edges were not sharp and the intensity varying across its width.

This difference is unquestionably due to the fact that ordinarily when the line of light is not uniform across its width the variation is a falling off of intensity from the center to the edges which gives a one half sine wave condition to the line of light, this half wave subtracts from the sine wave which is being recorded on the film to the amount of its magnitude, which, of course, depends upon how fast the intensity falls off toward the edges.

This condition of falling off towards the edges increases as the line of light is made finer, particularly as the mechanical stops are brought closer together increasing the ratio of penumbra or edge shadow to the illumination area so that in attempting to create an extremely narrow line of light you run the risk of not only losing exposure, but also of not gaining the expected high frequency. And, of course, in the case of the two .0006" lines of light the one falling off at 9,000 cycles can be duplicated by using a line of light of good character that is .002" in width.

Therefore when greater exposure is desired for glow lamp recording it would naturally follow that the line of light should be as wide as possible, consistent with its character as one means of increasing the exposure.

Experiments with a .003" width line of light having excellent character showed almost enough exposure for straight line recording burning the glow lamp at a static current of 5 millamps connected from a noise reduction amplifier, and the quality of the lower register was far superior to the quality obtained with narrower lines of light. Although the frequency response cut off at 6000 cycles the quality of the lower register can be accounted for by the fact that the increased width increased the film motion tolerances by about three times over a normal line of light. (The theory of film motion relative to aperture size is I think too well understood to merit discussion in this article.)

Of course, for good recording it is necessary to record much higher frequencies than 6000 cycles and further experiments were conducted by using a .0006" line of light in combination with the .003" line of light. The result of this test proved more than gratifying, the frequency range was extended to 17,000 cycles although maintaining the same quality in the lower register and the exposure is shown in the accompanying graph gave a gamma of .45 with fifty per cent transmission with the lamp current still at 5 millamps.

The performance of this dual optical system may be likened to the dual horn combinations where one horn responds from 25 to 5000 cycles and the second horn responds from 4,000 to 16,000 cycles, except that the narrow line of light which records the high frequencies is recording all of the line, adding to the exposure of the wide line of light, although not changing the quality of the lower register.

While at this writing there has been only a few thousand feet of commercial recording completed with this system, the first picture was composed of sold string orchestration and violin solos, the quality of which can only be appreciated by actually hearing the sound.





## DeVry Sound Recording Camera

by

A. P. Hollis

THE DeVry Sound Recording Camera is of the single system type, using a standard glow lamp. The housing is of aluminum to assure extreme rigidity coupled with light weight, and all of the parts are carefully finished with micrometer precision to assure perfect operation. The mechanism is of the standard two-claw type. An innovation in this camera is the sound sprocket filter. This is a mechanical fly wheel consisting of a modification of the Robertson patent—the whole system is mounted on ball bearings.

The DeVry Camera is of the removable magazine type and will accommodate either 400 or 1000 feet magazines as desired. Detached from the tripod, the camera is a simple metal box equipped with a handle, which makes it as easy to carry as a light grip. It is furnished complete with pack for monitoring purposes, which makes it possible to determine exactly what is being recorded. A tachometer at the rear shows the operator at all times at what speed the film is traveling, and two switches are furnished, one for the motor and one for the lamp. The speed is controlled by an automatic electric governor, which maintains uniform speed even with a variation in load or voltage of 15 per cent.

Gears are of steel and inertia throughout to assure long life, and a footage indicator is provided to enable accurate measurement of either 400 or 1000 ft. reels.

Any standard lenses may be used in connection with the DeVry Camera as the lens mount is of the bayonet type and lenses are instantly interchangeable. A standard F13.5 two-inch focusing lens is furnished with the camera. A rotating three lens turret is optional equipment.

Two systems of focusing are provided, one of which consists of a view finder which swings down from the lens mount, and the other a direct-on-film prism type of finder located at the side of the camera.

The prism type view finder is equipped with a magnifying lens for easy focusing.

The variable density system of recording with a glow lamp was chosen, because of the consistency in results both in recording and reproducing. This method of light modulation for variable density type of sound track is claimed to give extremely high frequency response and requires no mechanical adjustment.

The quality and volume of the recording is practically independent of the average time of exposure or per cent of gamma development. A two element recording lamp is used with the equipment.

The light from the glow lamp is projected through a lens against the film. As the microphone picks up the sound impulses these are transmitted through the amplifier to the glow lamp, the light of which varies in intensity and registers on the film.

The operation of the DeVry recording camera is simple. Coming from the upper feed magazine, the film passes over the large feed sprocket, through the gate in front of the lens, back over the take-up sprocket, over the sound aperture to the sound sprocket, over the takeup sprocket and back into the takeup magazine.

Two switches on the side of the camera control the motor and the glow lamp. With the camera in operation, the scene may be followed by the view finder, and a calibrated volume indicator in the amplifier assures control of the sound at all times. A head set also permits a careful check on the sound while it is being recorded.

The whole system consists of a camera and tripod, one amplifier case and one case holding the microphone, cable, "B" power supply, head phones, etc.—the whole outfit weighing less than 150 lbs.

The amplifier measures 16 inches long, 9 inches wide, and 5½ inches deep, and is self-contained. While portability, simplicity, and light weight have been taken into consideration, quality has come first, and there has been no sacrifice in amplification to achieve portability. It has a gain of 105 decibels, and can record a range of from 20 to 12,000 cycles on any type of film stock, with a proper lamp and optical system. Any number of microphones or head amplifiers can be coupled into this amplifier from a separate mixing panel, which can be supplied where desired. Normally the DeVry amplifier is equipped with a single plug input for one dynamic microphone. The mixing-panel, which permits the use of several microphones, is naturally recommended for studio recording, or for recording or "dubbing."

The DeVry amplifier receives all its power from a 12 Volt storage battery, so that either on location or in the studio it is independent of line current, and assured of a uniform power supply. In studios where it is desired, however, a special DeVry power-panel makes it possible to operate the equipment from 110 Volt Alternating Current.

## Development of



MGM Rotunda-bulter

THE development of the mobile type of camera-carriages—individually termed “pantulator,” “dolly,” “booms,” and “cranes”—has been motivated by two basic considerations. The original thought, of course, was merely to provide a device for the making of scenes involving the moving-camera technique; but recently another consideration has arisen, namely, expediting production by means of an instantly-adjustable camera-stand, which is also capable of being used for moving-camera shots. This latter consideration, however, has influenced only the designs of the past twelve months.

The earliest “dollies” were, of course, used during the silent-picture era. Correctly speaking, they were probably not designed, but assembled from such materials as were easily at hand, accordingly, they were very crude. One of the more primitive designs—the Paramount dolly No. 1—is shown in an illustration. As can be seen, it is simply a low platform of wood, fitted with Model “T” Ford automobile wheels and tires. The camera was mounted upon its usual tripod, which was in turn set upon the dolly-platform, and hied down. The contraption was then moved as requisite by the stage crew, and steered by means of a tongue, which also enabled the stage-hands to apply the motive power effectively. These early dollies were relatively large; but as new ones were needed, it was found possible to reduce the size markedly, and to increase the effectiveness and controllability. The more recent types average perhaps four feet by six feet in size, employ much smaller wheels—usually industrial truck-wheels or airplane wheels—and brake and steer on all four wheels. Several truck designs have also been evolved, some three-wheeled, others four-wheeled, but all designed to turn in the shortest possible radius. Even since the advent of sound, these older devices are still utilized to some extent, especially for exterior scenes and for interiors which require only simple movement.

The next step was the development of the big camera cranes and booms. Probably the first of these was the one made for the filming of Universal’s “Broadway,” and

first used by Hal Mohr, A.S.C. on that production. This crane consisted of a huge steel girder, 31 feet long, and heavily counterweighted, mounted upon a 14 foot cylindrical steel turner which was, in turn, mounted on a six-wheeled truck chassis. At the extreme end of the girder was the camera platform, a round, cage-like turntable, carrying the camera, two or three operators, and all the necessary controls for the crane. The crane was electrically operated, in all its movements, weighed 28 tons, and cost over \$35,000 to build.

In operation this crane can achieve simultaneous and independent movement of every component part. The truck chassis will move forward or backward at any speed up to 25 miles per hour. The girder can be swung up or down at a rate of 300 feet a minute, or horizontally at twice that speed. The camera-platform (which is kept level regardless of the inclination of the boom) will revolve at 100 revolutions per minute. The girder will make a complete 360 degree circle horizontally, or swing through a 180 degree arc vertically. Extended straight up, the girder raises the camera over fifty feet above the ground, yet the camera-platform can be brought down to the stage-level (or lower) in two seconds. The operation is almost completely silent.

The value of this crane is, of course, obvious; but in the light of the more recent designs, it appears that its construction involved unnecessary size, weight, complication and expense. It is evident, for instance, that a device of such dimensions could only be used on an exceptionally large stage, or out of doors, if its full advantages were to be utilized. Similarly, the use of aluminum alloys of high tensile strength, such as Duralumin, would naturally reduce the weight. With reductions in weight and bulk, the value of mechanical operation becomes somewhat questionable. Accordingly, in all subsequent designs, there have been progressive reductions in size and bulk, an increased use of duralumin in place of steel, and, in every instance, manual power is substituted for any form of motor-drive.

Representatives of these economies is the Metro-Goldwyn-Mayer crane, designed by John Arnold, A.S.C. It is roughly half the size of the earlier design; it weighs but one-seventeenth as much as the larger mechanism; and the cost is but one tenth that of its predecessor. In other words, it elevates the camera to a maximum elevation of 24 feet, weighs but 3,300 pounds! and costs approximately \$3,500. These savings have been secured, however, with no sacrifice of other structural strength or operative efficiency. The undercarriage consists of a rigid framework of channel-form steel beams, with solid-tired truck wheels mounted without springs at the ends. Immediately above this undercarriage is a U-shaped member in which the crane-arm itself is mounted. This is pivoted in order to permit the crane to swing through a complete horizontal circle, while the arm may travel through a vertical arc of approximately 90 degrees. The arm itself is a tapered cantilever of riveted duralumin, reinforced with tubular radius-rods, which also serve to maintain the camera-platform in horizontal equilibrium regardless of the angle and elevation of the supporting arm. The camera-platform

# Mobile Camera-Carriages and Cranes

by

William Stull, A.S.C.

itself is mounted on a post-shaped fitting, pivoted at the end of the boom and radius-rods. The camera-platform pivots in turn on this post, moving through a horizontal arc of over 300 degrees. It is turned by means of a two-speed hand-wheel-operated panoramic gear similar to those used in the panoramic heads on M-G-M blimp tripods. The head carries, in addition to seats for two or three operators, a standard blimp camera-mounting, which is tilted by a second hand-wheel. Elevating or depressing the boom, as well as revolving it or moving the chassis, is done by the stage crew. The booms are carefully counterweighted, so that it may be tilted by one man.

The big camera-boom used at the Paramount studio is of very similar design. It utilizes a somewhat lighter chassis, however, and the operation of the camera-platform is somewhat different. In this device, the camera (with or without a blimp) is mounted upon a standard pan-and-tilt head, which is in turn mounted on the boom. The revolving of the camera-platform is also controlled manually, but through a pair of strap-like foot pedals, which operate like the rudder-controls of an airplane. This crane is the design of Virgil Miller and the Paramount Mechanical Construction Department.

The United Artists Studio has also developed a large crane, which is, however, of decidedly lighter construction, instead of the box-girder construction in the beam, this crane uses a pair of duralumin I-beams, with solid transverse bracing and wire-bracing for longitudinal rigidity. The arm is mounted on the chassis by a single-point mounting of 4-inch tubing.

The most recent step in the evolution of mobile camera-carriages is the development of small devices which combine the functions of crane, dolly and tripod. With a single exception, these are all developments of the past eighteen months. The exception is an experimental unit made by the R. K. O. studio for an elaborate musical film which never reached production. The device itself has seldom been used.

Among the existing designs, there are two widely divergent schools of thought. In both instances, the goal is the same, but the means of attaining it are different. One school of thought prefers cranes of reduced size, this is exemplified in the devices used at the Paramount and Fox studios, the other has resulted in the development of a radically different device known as the "Rotambulator," which was jointly developed by John Arnold, A.S.C., and the Bell and Howell Co. This latter device has appeared in two slightly differing forms, the first being the one in use at the Metro-Goldwyn-Mayer Studio, and the second the



Top: Paramount's small camera crane.  
Center: Early Dolly. Bottom: Large Paramount camera crane.

commercial model manufactured by Bell and Howell.

The M-G-M "Rotambulator" is essentially a circular platform, mounted on an extremely low, wheeled undercarriage, and fitted with sockets for lights, seats for the operative cameramen, and an eight-foot vertical column upon which the camera-seat travels. By the operation of a hand-wheel at the base of the column, the camera may be raised from a position approximately eighteen inches above the floor-level to a height of eight feet. Another hand-wheel, placed conveniently by the operative cinematographer's right hand, tilts the camera as does the tilt-head on an ordinary tripod, while a third wheel, at the operator's left hand, revolves the entire platform—column, seats, lights and all—through a full 360 degree circle. In addition, the low undercarriage permits horizontal movement of the rotambulator, either in straight lines or curves, while the rear wheels, which are placed in a single track, close together, permit the assembly to be rotated on the axis of its front wheels. Due to the extremely low undercarriage, and to the wide track of the front wheels, the rotambulator is steady, even when the camera is raised to its maximum elevation, to make assurance doubly sure, however, retractable feet are provided at the corners, so that the device can be anchored in any given spot.

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# PHOTOGRAPHY

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## of the MONTH

### "THE BARBARIAN"

photographed by **Harold Rosson, A.S.C.**

Egypt—the Egypt of the fictitious of the E. M. Hull school—furnishes the background for this extremely pictorial romance. Naturally, it offers every imaginable ingredient of the pictorial glamour that made "The Sheik" and its successors optical treats, and the tremendous advances in cinematographic materials, equipment and methods have vastly increased the pictorial possibilities of such a story. Cinematographer Rosson has taken full advantage of all that was available—and turned out one of the most spectacularly pictorial productions seen in some time. "The Barbarian" (originally titled "The Man on the Nile") is in every way welcome after these many years of ultra-realistic pictures, with their harsh, newsreel-like photography. It is strikingly pictorial without going to the undesirable extreme of being a story concealed by its photography. Rosson's compositions and lightings are beautiful, tasteful, and so skillful that they deserve not alone praise, but careful study.

M-G-M has given this production a beautiful mounting and the M-G-M Laboratory has turned out beautiful release-prints, but one important factor has unaccountably been neglected. "The Barbarian" is a production which would be tremendously enhanced by the use of tinted-base stock throughout; moreover, the picture is so cut that the use of tinted-base film would be extremely easy, as most of the night and interior sequences are long—very nearly full-reel lengths—and the changes would all come at the reels. After seeing the picture, I queried the sound-engineers, asking if the use of tinted positive would be injurious to their prized tone-quality; the answer was, "No, it would be all right with us." This omission, therefore, must be strictly chargeable to the executive and laboratory departments. I therefore suggest with all due respect to these august gentlemen, that they make at least one print of "The Barbarian," using the tint known as "Caprice" for the body of the picture, "Nocturne" or "Purple-haze" for the night-exterior and "Sunshine" or "Firelight" for the interiors. The result of the use of these colors, combined with the imaginative cinematography of Hal Rosson, should add mightily to the warmth and romantic appeal of the production.

### "A BEDTIME STORY"

photographed by **Charles Lang, A.S.C.**

A feature-comedy such as this one, which frequently more than bends upon the slapstick, is hardly an assignment which would offer a cinematographer—even such an artist as cinematographer Lang—any outstanding opportunities for pictorialism or the type of camerawork that he likes best to do. Nevertheless, Charles Lang, A.S.C., has done remarkably well with this assignment. He has managed to surmount the handicap of having to light for broad comedy rather than for quality—and done it most remarkably well. There are a number of individual scenes

and sequences which are most artistically photographed—especially several light-effects. He has also photographed Helen Twelvetrees unusually well. Taken all in all, Lang is to be congratulated for making such a fine combination of artistry and commercial workmanship out of a decidedly difficult assignment.

### "HELL BELOW"

photographed by **Harold Rosson, A.S.C.**

Indisputably, this is one of the most striking productions of the year. It abounds in sensational action—aircraft attacking submarines, ships being torpedoed, etc.—which has been most expertly photographed. But more than this, Hal Rosson, A.S.C., has achieved some unusually fine photography in the more intimate parts of the picture. His treatment of the several sequences made inside the submarine is especially noteworthy, while a long sequence of effect-lightings occurring during a love-scene between Robert Montgomery and Madge Evans, in the early part of the picture, is outstanding. Several of the scenes in this sequence offer an unusual combination of the virility, beauty and imagination of the best of European cinematography with the perfected technique of one of America's best camera-artists.

The miniature and special-effects work in this production is also notably fine.

One must, however, make two or three criticisms in the first place. MGM made the serious mistake of using a very bad working print for their press-showing, doing grave injustice to everyone concerned with the production. The release-prints will unquestionably be better; moreover, one understands that they will be made very largely upon tinted-base stock—which should greatly benefit the production. Another flaw is that neither scenarist nor director apparently give any thought to the proper treatment of time-lapses. Accordingly, several sequences suffer decidedly from a garbled impression of time, especially that in the disabled submarine, where action which would logically have taken over a day and a half is presented in such a manner as to suggest that but a few hours elapse. In such situations, the camera can easily be made to suggest the passage of time in a very small footage, surely if the writers and directors were not equal to the demands of so simple a situation, they could have called upon the experienced brain of Cinematographer Rosson, and avoided a flaw which will undoubtedly bring forth adverse criticism wherever the picture is shown.

### "SONG OF THE EAGLE"

photographed by **Henry Sharp, A.S.C.**

This is another of Henry Sharp's expertly-made productions for Charles Rogers. It doesn't offer any spectacular opportunities for unusual pictorialism, but Sharp has done excellently, giving it the realistic treatment demanded by the story, without any sacrifice of quality, or deploring the players unfavorably. Cinematographer Sharp is, in fact, to be commended upon his excellent lighting of the cast—especially Louise Dresser.

# Some Don't, But, I Like Light Sets

by

**George Folsey, A.S.C.**

**LIKE** light sets. Some cinematographers don't, I realize, but I have just finished two successive productions—"Looking Forward" and "Reunion in Vienna"—in which a majority of the settings were either pure white or cream-colored. Not only did these unusually light-colored settings fail to give me trouble, but they actually helped me to turn out some of the most effectively photographed scenes I have ever made.

Perhaps I should qualify my original statement to a certain extent, however, for there are two conditions which must always apply if one is to do good work on any sets—especially light-toned ones! The art-director must know his business, and so must the laboratory. You've got to

have the proper material to work with, in the first place, and definite assurance that your work won't be mishandled in the laboratory. At the Metro-Goldwyn-Mayer Studio, I found that Cedric Gibbons and his associates in the Art Department most certainly knew how to design sets that are, as they say in Europe, "photogenic", and John Nickolaus and his laboratory know their end of the work so well that you can go home at night secure in the knowledge that "Nick" will make the day's work even better than you expect it to be. So, as I said before, I like light sets.

Don't misinterpret this—working on light-colored sets isn't easy, you've got to be on your toes every second. You've got to know lighting, and demonstrate that knowledge in every shot, for light sets are primarily a problem in lighting. But the results can be such as to make this added effort decidedly worthwhile, you can achieve a new beauty, greater delicacy of gradation, more effective compositions and lightings, and in a word, express yourself more thoroughly, on light sets.

When working on light-colored sets, you must pay unusually close attention to lighting both set and players, not merely well enough to make an exposure that shows set and people tolerably, but to use the magic of light, shadow and half-tone to paint a picture on your film. Working on the usual run of sets, painted in darker shades which photograph in a range of the darker half-tones, set-lighting will almost take care of itself. You will usually have something—paneling, drapes, or chromatic variations, which will (if properly designed) give you the patterns you desire almost without the aid of your lighting. But on extremely light sets—especially the modernistic ones—you are almost sure to have large expanses of unadorned wall, which you must decorate with light and shade. Therefore, the first step in lighting such a set is to take advantage of every-

*Continued on Page 36*

Editor's Note: This is the first of a series of articles to be written by leading cinematographers of their photographic likes, dislikes and reasons for them.

One of the light-toned sets from "Reunion in Vienna" showing Folsey's decorative set lighting.





# Victor 10 FH Projector

April 24, 1933

Report of A.S.C. Testing Committee  
concerning  
Victor Animatograph Corporation's  
Model 10FH Premier Hi-Power Pro-  
jector for 16 mm. Film

WHEREAS the Victor Animatograph Corporation has submitted to the American Society of Cinematographers its projection-machine for 16 mm. films, known as the "Victor Master Projector, Model 10FH," duly accompanied by the aforementioned manufacturer's claims and specifications for that article, and

WHEREAS the Testing Committee of the American Society of Cinematographers has duly tested the said product in accordance with these specifications and with practical tests, and

WHEREAS the said Testing Committee has found the said "Victor Master Projector, Model 10FH" to be satisfactory



according to the aforementioned claims and to have satisfactorily undergone the Committee's practical tests,

THEREFORE does the Testing Committee of the American Society of Cinematographers certify that the said "Victor Master Projector, Model 10FH" is worthy of the Approval of the American Society of Cinematographers, and does authorize the Secretary of the said Society to bestow upon the said "Victor Master Projector, Model 10FH" the mark of the Society's approval, which Stamp of Approval the Committee does authorize the said Victor Animatograph Corporation to imprint upon its product, the said "Victor Master Projector, Model 10FH," and to use in its advertising of that product so long as the design and manufacture of that product do remain unchanged

## WHEELS OF INDUSTRY



### Monotone Viewing Glass

● Especially designed for use with Super-Sensitive Film, George Scheibe is marketing a viewing glass that is claimed to give a monotone translation of all colors into their various black and white values. This glass is composed of two units, one for use with artificial light, the other for use in daylight. Scheibe claims it will find a wide use with art directors, as well as cinematographers.

### Two New Victor Projectors

● Two new Projectors have been added to the Model 10 Series by Victor Animatograph Corporation, Davenport, Iowa, to meet certain domestic and foreign demands.

In numerous midwestern and northwestern communities of the U. S., many schools, churches and homes derive their electric power from 32 volt lighting plants. In these same localities are towns serviced with 110 volt current, with the result that county agents, school superintendents, salesmen, etc., must provide for both voltages in connection with the use of picture equipment. Heretofore the equipment owner found it necessary to buy both 110V and 32V motor and lamps and to interchange them when necessary.

It is claimed the new Victor 10C Projector, which is a combination 32V-110V Equipment, has already been enthusiastically received in such communities. The projector is equipped with 32

volt motor and 165 W. 30 V. lamp. When used on alternating or direct current of 105 to 120 Volts, a resistance control knob on the base is set to provide the necessary resistance to reduce the current to the 32 volt rating of motor and lamp. When used on 32 volt current, the resistance is cut out by a turn of the control knob and full line voltage goes direct to motor and lamp. The 156 Watt 32 Volt lamp supplied is a high intensity light source which provides sufficient illumination for large pictures and long projection throws.

In foreign countries particularly, and even in sections of the U. S. and Canada one encounters line voltages ranging all the way from 105 to 250 volts. To meet this condition Victor has announced the

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# AMATEUR SECTION

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## Next Month . . .

• WE HAVE SOME CORKING GOOD STORIES for you—constructive and informative articles. Here's an example of one of them: "Studying the Professional." We'll give you some low down on how to determine what to shoot from the professional's viewpoint.

• BUT, HERE'S THE THING we want to know. We want to know what you want to know. Don't hesitate to ask us to write a special article on some particular phase of picture making. Or if the subject is not big enough we will cover it in our HERE'S HOW. That department alone is worth the price of the magazine. Don't be bashful. We love to answer questions.



## Tinting and Toning 16 mm. Films

by

**William Stull, A.S.C.**

ANYONE who has seen even a single issue of the *Pathe Audio Review* must surely appreciate the beauty that can be added to motion pictures by the judicious use of the coloring processes known as tinting and toning, either singly or in combination. There is no need, however, for the amateur cinematographer to envy his professional cousin, for both tinting and toning can easily be done at home, and while it is true that some of the formulae used professionally call for more or less rare dyes and involve a certain degree of complication, the great majority of tints and tones ordinarily used can be achieved very easily and with little difficulty or expense. The simplest solutions for this purpose are those prepared by the Barrington-Wellcome Company and marketed under the trade names "Tabloid" and "Soloid." While these preparations are intended primarily for the use of still photographers in staining and toning glass and bromide prints and lantern-slides, they are none the less excellent for use with one film, whether reversal or positive. By the use of these products, one may easily produce Sepia, Blue, Green, and Red-chalk tones, and Red, Green or Yellow tints. In addition, the Eastman Sepia toner and the Agfa Cold-tone solutions may somewhat extend the range of tones easily available.

Here, one must differentiate between "Tints" and "Tones." Tinting affects the film-base, and not the image, giving an effect such as one would get by slipping a sheet of colored glass or gelatine over the lens of the projector. Toning, on the other hand, colors the picture itself, but leaves the high-lights clear. Tints and tones may be used in combination, with excellent results, as, for instance, a

forest-scene using a sepia tone over a green tint, or a night-exterior using a blue tone over a red or yellow tint, and so on. Users of the negative-positive system may have their prints made on tinted-base stock, and then tone them; but either toning or tinting may easily be done at home, on either positive or reversal film.

The equipment required for tinting and toning is simple, and easily acquired or made. The exact nature of the equipment will, of course, depend upon the method you wish to use. Probably the simplest is the drum system, in which the film is wrapped spirally around a drum which is revolved with its lower edge dipping into the solution. For the average small-quantity sort of work that most of us do, the "Leica" developing drum shown in the illustration is ideal. As will be seen, it consists of a glass drum which will hold approximately ten feet of film, a supporting stand, and clips by which the ends of the film are attached to the drum. For the greatest convenience, one should have—or make—two additional stands so that the film may be moved from the toning solution to the wash, etc., without having to move the stand every time.

If, however, you prefer to use the rack method, it is quite easy to make pin-racks to fit any tray you may have. These racks are made of two flat arms of hardwood, joined together in the form of a cross, and fitted with a series of pegs (which can be made of ordinary cabinet-makers' dowel stock) around which the film is strung in a spiral. The length of the arms will, of course, be dictated by the diagonal measurement of the trays you use; the pegs should be spaced as close together as is safe, giving plenty of free space between the face of each winding of film and its neighbors. The pegs should extend up about three-quarters of an inch from the base. Using this method, the film is completely immersed in the solution, while in the drum method the film is revolved so that it constantly dips into the solution. The best speed for revolving the drum is slightly less than one turn per second. In either method, a drying rack or drum is necessary; this is simply a cylinder whose sides, instead of being solid, are made of a number of parallel bars; the ends may be solid or not, as is most convenient for the maker. This drying drum should be revolved steadily by a small motor, though in the smaller sizes such as suffice for amateur use, it is quite feasible to fit small vanes inside the drum, and use an electric fan for the purpose of revolving the drum as well as for circulating air around the drying film. In a pinch, one may dry the film on a simple rectangular frame, such as an unpainted picture or mirror-frame; but this is not to be recommended strongly, as the film develops rather definite bands where it dries in the sharp angles incident to winding on such a dryer.

The actual operations of tinting and toning are simple and may, of course, be carried out in daylight or ordinary white artificial light. Regardless of the method or process used, the film must first be thoroughly washed, not only to ensure that it is completely free from all traces of hypo, but to assure that it is uniformly soaked, and therefore uniformly conditioned to receive the coloring solution. This washing should be for at least ten minutes in order to assure uniformity. The film should, of course, be wound on the drum or rack for this washing. After washing, the film will be found to have stretched to some extent; therefore it should be tightened in order to prevent any overlapping. The film is then removed to the solution or solutions required by the process being used, washed again, and put on the drying rack. When doing this the film should be squeezed by gently passing it between two layers of chamois-skin in order to remove the surplus moisture and prevent the formation of irregular water-marks. The

*Continued on Page 32*



# When An Amateur Turns Professional

by

W. H. McCullough,  
*Amateur*

**N**OT all of us care to make our living with the camera, however the story of Joseph Yolo's progress from amateur to professional is interesting, and to some amateur it may be an inspiration.

Early in the summer of Nineteen twenty seven Yolo decided to take a vacation from his work as automobile salesman and attend the American Legion Convention in Paris, revisit some of the scenes of his army days and then visit a few of the historic cities of Europe. Realizing that several hundred fellow members of his local Legion Post could not attend the big convention in France, Yolo, or "Joe" as he is known to his friends, decided to take with him a sixteen millimeter camera in order to bring back a record of the trip and the convention parade.

Partly because Cine cameras and film are so nearly fool-proof and partly because Joe had the knack of picking interesting "shots," the eighteen or nineteen hundred feet of film brought back from the European trip was good. This film after being shown at local Legion Posts was soon being shown all over the State of Washington. Noting the interest in these motion pictures, Joe developed in his spare time, a local news reel which he called "PASSE' NEWS."

"Passe' News, far from being 'old or worn out,' to use the French meaning, was immediately in great demand by luncheon clubs, fraternal organizations, and Chambers of Commerce. While many of Joe's leisure hours were spent on film for this reel he found time to study lighting, processing and kindred subjects and also time to build equipment to produce special effects, special titles and other things of like nature which all go to make the difference between—just pictures—and interesting pictures.

"PASSE' NEWS was a part of Joe's hobby and was done with zeal and delight and not for profit although during this time he was doing more and more commercial and advertising work of a profitable nature.

By Nineteen Thirty the paying work had increased to such an extent that Yolo left his position as sales manager for an automobile concern and opened a studio and laboratory in the most prominent building in the city. His equipment consisted of several cameras of both sizes, printers for sixteen and thirty five millimeter film which he had rebuilt to automatically print dissolves, fade-outs, fade-ins and other effects. A motorized and fan equipped drier and an elaborate title making device, both of his own design and construction, were added. With the title making machine, which he equipped with both sizes of camera

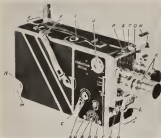


At top, Corner of Yolo's laboratory and at bottom, Yolo at his rebuilt Sykes and tripod he designed himself.

he is able to turn out practically any type of title as this device is fitted with turntables, slides, curtains and lights all motor or spring controlled for various speeds and movements.

Profits in the new studio come from the sale of cameras, projectors and film, from printing and developing for amateurs, from the making of trailers and special film for the local theatres as well as taking, editing, and printing special features for commercial organizations. One job which kept him busy for a month was the making of a special film to show points of interest along, and promote travel over the nine hundred and sixty four mile Cascade International Highway Uncle Sam, through the U S Park Service, selected Mr. Yolo for a two months' job of shoot-

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## A "Professional"

**R**UMBLINGS and rumors of a new camera to come from Eastman have been rampant for several months. Gossip claimed it would have everything, and gossip was not far wrong.

Under the name of the Cine-Kodak Special, Eastman this month introduces a 16 mm. camera of maximum versatility. This camera is going to have a mighty strong appeal to advanced amateur motion picture makers, to clubs, engineers, manufacturers, doctors, laboratory technicians and that class of cinematographers having use for 16 mm. equipment with a professional camera's range of abilities.

Production arrangements provide that the Cine-Kodak Special shall be precision-made by individual skilled labor according to their announcement. Fabrication of the camera will be entirely on a custom-made basis, which allows for modifications when any special requirements present themselves. Although the camera is in itself claimed to be the most complete 16-millimeter instrument, the Cine-Kodak Special will serve in many cases as the basic model for the even more elaborate custom-built motion picture camera which cinematographers may desire.

The basic model incorporates provisions for double or multiple exposure, dissolves, slow motion, fades, masking, interchangeable film chambers, variable speed, and framing and focusing through the main lens system of the camera. It has a variable shutter, a two-lens turret, and provision for either spring motor drive, hand cranking, or the attachment of an electric motor drive. In addition to these features of the basic model, additional equipment or alterations will on special order be applied to the camera in process of manufacture.

How are these various tricks and refinements accomplished?

Fades are made possible by the camera's variable shutter. This shutter may be adjusted to full opening, one-half, or one-quarter, or closed. The ability to effect these changes while the camera is running makes fades, in or out, possible.

Lap dissolves (the overlapping of two fades) are made possible by use of the variable shutter together with the ability of the camera to wind back the film for a second exposure.

Double or multiple exposures are possible because the film can be wound back.

Interchangeable chambers, of 100-foot or 200-foot capacity, make it easy to shift at any time from one type of film to another. Without finishing out a roll, it is possible to change in a moment from panchromatic to Kodachrome or to super-sensitive panchromatic by substituting a chamber loaded with the other type of film. The ability to expose 200 feet of film continuously is also a marked advantage. The chambers are interchangeable without fogging even one frame of film.

A positively-acting mechanism for making single pictures permits animation, laboratory "growth studies," speeded-action scenes, and various tricks.

A separate single-picture shaft for an electric motor drive is useful for time and growth studies, or for experimental sound work. Another shaft permits the connection of an electric motor to the camera for continuous operation.

The Cine-Kodak Special has a slot for the insertion of

**A** Eight-frame shaft: For winding film backwards for dissolves and multi-exposure work. Also for normal operation when hand cranking is desired, or for continuous when the motor runs down.

**B** Six-frame shaft: For special single-frame work such as growth studies. Camera can also be driven by this shaft for synchronous with experimental laboratory equipment.

**C** Detachable head crank: Fits either of the two shafts.  
**D** Single frame release: For animation and ordinary single frame work.

**E** Variable shutter lever: Camera can be operated with shutter closed,  $\frac{1}{2}$  open,  $\frac{1}{4}$  open, or full open. Variable shutter also can be gradually closed or opened while camera is running for fades and dissolves.

**F** Motor crank: Almost 40 feet of film with two winding. Roll spins when motor is slowly wound and when it has reached end of run.

**G** Rapid exposure button: Stopping mechanism is "disengaged" for high speeds.

**H** Regular film motor: At rear of camera. Does not show in the picture. Operates at diameter of roll of film. No setting required.

**I** Chain-driven film motor: Very accurate, requires setting.

**J** Camera speed dial: Range: 8 to 64 frames a second.

**K** Removable film chamber: Contains self-driven mechanism, gate, sprocket, and regular film counter. Chamber is interchangeable with either 100-foot or 200-foot chambers. One chamber may be kept loaded with Kodachrome, another with panchromatic film, etc.

**L** Aperture-closing shutter: Glass chamber aperture so that no film is fogged when chamber is removed. Fog-proof so that chamber can not be removed without closing film shutter. Also, it must be open for the camera to run. The shutter button is hidden in the picture.

**M** Chamber release lever: For detaching film chamber.

**N** Reel finder: Used eye-level type, attached to lens.

**O** Reel finder: Telescoping provides image on ground glass showing exact field and does that will be on film built-in magnifying glass enlarges image for focusing.

**P** Reflex finder button: Opens reflex hood. Glass automatically when camera is started.

**Q** Turret head.

**R** Interchangeable lenses.

**S** Simplified exposure plate.

**T** Mask slot: Special masks can be inserted before aperture to provide unusual picture shapes. Half-masks can be used for double-exposure work.

**U** Drive connections: For attaching electric drive to motor shaft. Useful for special laboratory work. Remote control also attaches to these connections.

# 16 mm. Camera From Eastman

by  
**Karl Hale**



masks, and a set of simple masks will be supplied with the camera.

Half-masks, which blank out one side of the film or the other, permit the same person to appear twice in one picture when the winding-back feature is used to produce a double exposure on a single length of film. Animated and human subjects, as a matter of fact, can thus appear together in one scene. By the use of horizontal half-masks the bottom or the top of the picture similarly may be blanked out.

Almost 40 feet of film can be "shot" at a winding. An audible signal warns when the spring is nearly wound and when it is nearly run down.

The hand-cranking feature of the camera permits the filming to be carried on when the spring motor runs down, thus letting an entire film be shot without stopping.

The Cine-Kodak Special possesses a turret head for two lenses. Lenses are quickly interchangeable on the turret head, which will accommodate the various lenses that are available for the Cine-Kodak Special.

A reflex finder, which cuts in on the main lens system of the camera, thus shows the image actually formed by the taking lens. By the use of this finder, both the exact picture field and the precise focus may be obtained, even in such extreme close-up position as when the camera is only an inch or two from the object to be photographed. Such an extreme close-up necessitates the use of proper supplementary lenses. Backed film as well as clear-base film can be used without hindering this finder's operation.

The camera is also equipped with the usual direct view finder.

The speeds of the Cine-Kodak Special range from 8 to 64 frames a second, in the following gradations: 8, 16, 24, 32, 64.

There is a cushioned stopping mechanism for high speeds. There are two film meters. One, governed by the diameter of the roll of film, is for indication of the footage left for exposure in the film chamber. The other, geared and marked in individual feet, is intended as a guide in connection with the winding-back feature.

The variable shutter is useful not only for fades and dissolves but also as an additional exposure control. It is valuable for producing sharp images of fast-moving objects. It can be used in place of a neutral density filter to cut down the light in Kodacolor filming.

The engineers who designed the Cine-Kodak Special consider its most important innovations perhaps to be the eight-frame shaft (moving the film eight frames to one turn of the crank, for winding back or for hand cranking), the one-frame shaft (for special single-frame work such as growth studies or for driving the camera in synchronism with experimental laboratory equipment), the variable shutter, the removable film chamber, and the reflex finder.

Simultaneously with the Cine-Kodak Special, the Cine-

Kodak Tripod will become available, designed for the Special but useful also for other 16-millimeter cameras and still cameras. Horizontal and vertical and diagonal panoramas can be made with it. Furthermore, a motion picture camera attached to the Cine-Kodak Tripod can be pointed straight up or straight down—a tripod feature not ordinarily found.

A 1-inch F1.9 Kodak Anastigmat lens will be supplied with the Cine-Kodak Special unless a special order indicates that the substitution of another lens is desired. In addition to this lens, others directly available are the 15-millimeter f2.7 wide-angle lens, the 2-inch f3.5 lens, and the 3-inch, 4½-inch, and 6-inch telephoto lenses. Other desired focal lengths can be adapted to the Special.

The new camera is, in a word, virtually a professional camera in miniature. It is able to do anything that a professional, studio-type camera will do—and some things (such as photographing Kodacolor) which professional equipment cannot do. By virtue of its reflex focusing device, it should be the ideal equipment for use with extreme telephoto lenses, as field, focus, etc., can be checked with 100% accuracy.

Since it can be fitted with an electric motor-drive, the Cine-Kodak Special should lend itself excellently to experimental recording, especially by the disc method. While there is no information as yet forthcoming from the manufacturers, the camera should likewise prove easily adaptable to sound-on-film recording, using the newly-standardized R-C-A-16 mm. sound-on-film dimensions.

However considered apart from its possibilities as a sound-camera, the Cine-Kodak Special will clearly appeal to a surprisingly large clientele of advanced amateurs, semi-professionals, and professionals, who have been heretofore practically disregarded by the manufacturers. Amateur clubs, especially those interested in the serious production of dramatic pictures, and individual advanced amateurs who have long sought a camera as completely flexible as this will naturally find the new Cine-Kodak Special a camera ideally suited to their needs. The individuals who work in specialized fields, such as scientific and medical films, time-lapse studies, and the like, will also welcome it. Moreover, it is sure to reveal to the manufacturers an hitherto untouched field—that of the professional makers of 16 mm. productions for commercial or industrial use. These have heretofore been forced either to use simple amateur equipment, or to make their pictures with professional 35 mm. "release-prints."



Lenox R. Lohr, the author, finds new use for 1919 board.

## Motiographing The Jig-Saw Puzzle

by

**Lenox R. Lohr,**

General Mgr. Century of Progress  
(International Exposition)

THE present vogue of the jig saw puzzle suggested an interesting stunt which worked quite successfully and which I am here recounting for others who may be similarly interested.

Recently I took a strip of film of four children at the dinner table using two 500-watt lights and an F-19 lens. When this picture had been printed, I cut the first frame from the film and sent it to a commercial photographer to have it enlarged to a width of 12 inches. Of course, it remained in the same proportion as the original picture.

The size of 12 inches was selected to fit the size of my title board which was used in the process, but any size picture from 4 inches up should be equally satisfactory.

The large picture was carefully pasted to a thin board and, with a jig saw, sewed with irregular outlines into sixteen separate pieces. This work may be easily done at home by using a small coping saw from the ten cent store. However, if a more expert job is desired, there are numerous establishments which will cut the jig saw puzzle to order. The number of separate pieces should not be in excess of twenty-five, as too much footage would otherwise be used in assembling.

All the necessary parts have now been assembled for arrangement on my tiling board. This is a home made affair with the camera rigidly mounted at one end and a board 14 inches by 10 inches arranged to slide on the other end. Between these, two 100-watt projection lights, also on a sliding piece, are mounted behind reflectors. The board was erected vertically with the camera shooting downward, the title board on the floor. The jig saw puzzle was assembled on the board which was moved backward and forward and the puzzle adjusted until the extreme edges of the picture exactly coincided with the edges of the finder.

Considerable experimenting was necessary to obtain the correct lighting for when the regular illuminating lights were turned on two brilliantly reflecting spots were evident in the finder, in spite of the fact that a non-glossy print had been used. No adjustment of the reflectors or the lights would eliminate these glares. So for these fixed lights a detached 500-watt bulb was substituted and it was found that with the light impinging on the picture at an angle of 45 degrees from slightly to one side and about three feet away from the picture, no glare or reflection from the surface of the picture occurred. It was evenly lighted over its entire surface. The finder on my Victor Camera indicated clearly the best position of the light to reproduce as nearly as possible the tone of the original picture.

It was contemplated that while using the stop motion and taking one frame at a time, the various pieces of the jig saw puzzle would be slowly moved into position and assembled. A difficulty arose however in assembling the puzzle. The first piece would have had to be very accurately located so that the puzzle as completed would be exactly framed, and even a slight jar in the assembling process might easily have knocked it out of its position. It was also difficult to get the pieces assembled in their proper order. Both of these were obviated in the actual process by photographing the picture upside down, beginning with the assembled picture and taking it apart. Since the camera was fixed, the same result was achieved by turning the picture upside down.

So starting with the assembled picture, piece by piece was removed, each piece being moved from  $\frac{1}{4}$  to  $\frac{1}{2}$  of an inch for each picture taken. Care was taken that the movement be not jerky and that if the direction of a piece be begun in a straight line or a curve, it must travel along this path for six or eight frames before making a change in direction. From one to four pieces were in movement at all times, some of which are removed by a devious route creating the amusing effect in the finished picture of snatching around for their proper places. When only four pieces were left, they were disengaged, turned several revolutions on their own centers and taken from the board radially, leaving it entirely black.

Some of the pieces were interlocking while others would

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Alfred Gilks, A.S.C. experimenting with Kodacolor indoors

## Kodacolor Comes Indoors

by

A. L. Gilks, A.S.C.

THE recent announcement that Super-Sensitive Kodacolor film can now be used for making natural-color movies by artificial light is fraught with importance for amateur cinematographers. It means, of course, that the potentialities of this popular natural-color process are vastly increased; but more than this, it means that the amateur interested in lighting and interior cinematography has opened to him an entirely new field of endeavor: lighting for color. This can be as simple or as intricate as one wants to make it, as commonplace or as unusual as ability and equipment allow.

The first step, of course, is the use of the new Kodacolor ratio-diaphragm for use with photoflood lights. This is important, for the ordinary Kodacolor ratio diaphragms do not admit as much light—and what they do admit is in the wrong proportions to give satisfactory results. If you will examine the normal ratio diaphragms that are supplied with Super-Sensitive Kodacolor film, you will observe that the diaphragm reduces the effective area of the three filter-strips almost proportionately, having an opening roughly oblong in shape. The Photoflood diaphragm, on the other hand, leaves the red in the same proportion, but practically doubles the green and blue areas; this is to counteract the yellow-red components of incandescent light. Since this diaphragm reduces the red area to 6/10 of the full red area on the filter, it is officially termed No. 6; these diaphragms may be had without cost by writing the Kodak people in Rochester. Unlike some of the normal ratio caps, these can be used for all Super-Sensitive Kodacolor film so long as incandescent lighting is used, when you go out doors, of course, the ratio diaphragm that came with the roll should be used.

Kodacolor lighting, you will find, approaches professional

lighting—practice more closely than does the usual run of amateur lighting for black-and-white pictures. In the latter, you can use less light, and cover a larger area, moreover, you can pay your greatest attention to lighting your people, feeling sure that the general illumination will pretty well take care of the background—especially when you are using Super-Sensitive Panchromatic film. With Kodacolor, you will find it decidedly different, lighting the people is much the same, but you must make definite provision for your background if you want it to appear in the finished picture.

The important part of lighting people for Kodacolor interiors is to avoid either flatness or excessive contrasts. In other words, work for a definite balance, with one side of the face brightly lit, and the other half lit with but half as much light; then round the shadow side off with a nice back-light. You can get this balance easily in several different ways: by using two units on one side of the person, and one on the other, or—if you can spare only two units for all of the front light—having one unit much closer to the person than the other. In any event, this lighting should come from above the person's head, being so positioned that the shadows cast by the nose (when the light on the other side is not on) comes down to the corner of the mouth. The exact arrangement of the lighting, of course, will as always, depend largely upon the nature of the subject.

Now for the background: in closeup, if you have the background very close behind your subject, the "spilled light" from your lights in front of the subject will pretty well take care of the background. In longer shots, on the other hand, or in shots in which the subject must be more than say eighteen inches in front of the background, you will find it necessary (if you want the background to show in the picture), to deliberately light it with one or two lighting units especially placed for this purpose. This background lighting can be just as important as is proper lighting of the subjects themselves.

All of this seems to suggest that you'll need a lot of lighting equipment; actually, it will depend on what you are photographing. If you are making closeups, you won't need much; if you are making longer shots, you'll naturally need more light to cover the larger area; you won't be able to place your lights so close to your subject—and of course you'll need more lighting units to do it with. At any rate, you can hardly have too much light, or too many lighting units.

Although the new ratio diaphragms are consciously labelled "Photoflood," you needn't discard any other equipment you may have on hand. I have found that the regular photographic lighting-units, such as the efficient "Solis" and Kodalite units give very satisfactory results with Kodacolor. (The "Solis," of course, has the added advantage of being adaptable to photoflood bulbs as well as to the regular 500-watt tubular bulbs.) Since there are a number of inexpensive lighting units made for use with photoflood bulbs—units ranging in price from \$5.00 up—it is not difficult to assemble a surprisingly large array of lighting equipment for a very modest sum indeed. Then there are all sorts of makeshifts which can be used: table-lamps and bridge-lamps, for instance, can be fitted with the inexpensive 64-volt bulbs and used very effectively for backlighting and background-lighting; some of the multiple-socket reflecting type holders made for photoflood bulbs can also be pressed into service; and surprisingly useful "breadbox" and overhead units can be made at little or no cost out of wooden boxes, fitted to

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you know, get the feel of it and wish I had something to shoot. That's when I put in my practice. I will take a look at the light for the day and decide upon some certain set-up. I then judge the light and the exposure I would make. I then check that with the guide on the side of the camera. I am going through the same things I would go through if I were exposing film. I will change to some nearer object and determine by judgment how much I should open the diaphragm and then check it with my guide. By doing this I have engraved that guide indelibly in my mind. I know every classification in their order, which has proved mighty valuable as it gives me the number of stops from normal immediately.

I haven't let my practice stop there. I find myself viewing something when I am riding along that would make a good picture. I immediately endeavor to interpret that into the proper stop to be used. In this way I am getting just as much practice as though I were shooting the camera and exposing film.

This sort of practice has been tremendously valuable to me, not alone in saving film, but in that fine satisfaction of hitting the right exposure more frequently.

I suppose this sort of thing, getting the right exposure, is just as much a matter of practice as learning to play a musical instrument, or learning to write on this typewriter I am using right now. My first efforts were mighty crude, slow and awkward and I frequently hit the wrong key. By the same token my average of wrong exposures were in proportion to the number of times I used the camera. However, with my practice method which you will admit is not really a hard task, not a job, but if you love to take pictures, you really get delight out of merely setting your camera up, imagining your picture, and going through the procedure as though you were exposing film.

It does another mighty valuable thing for you. It gives you confidence in your judgment after you have found you are correct a couple of hundred times in your practice of checking your judgment against the exposure guide on your camera. If your camera hasn't an exposure guide, there is a book of instructions with it that will serve the same purpose. If you have found a correction factor with the guide you have because of the location in which you are living, you will find that you will automatically apply this in your practice. At least that has been my experience when I have taken pictures under different conditions. You recognize haze immediately, you recognize the yellowness of the light as it grows later, you automatically discriminate between summer and winter light. It simply becomes automatic with you.

When I had made a couple of good pictures I sort of resented the exposure guide on my camera, I unconsciously developed the feeling that I knew. In fact, I figured that I could improve on the guide if I opened just a bit more or closed down a trifle more than it indicated. I felt I could improve on their instructions. A couple of poor pictures, however, proved to me that the entire camera was not worth any more to me than the correctness of the exposure I gave the film. I then argued myself into the fact that the money I had paid for the camera was really paid for the exposure guide and the rest was given with it.

The guide being a free accessory we are inclined to give it might little value. If we had to buy that guide and paid the price it represents in good pictures, we would pay as much as we paid for the entire camera. Because it does not cost anything, it is frequently ignored by many amateur motion picture makers.

I wouldn't say from this analysis that exposure meters are not valuable, but at the time I first secured my camera

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# I Practice Correct Exposure

by

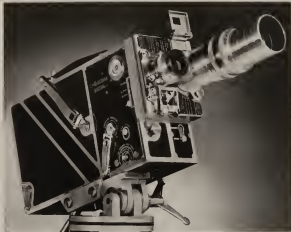
J. R. Nixon, Amateur

HAVE washed a great deal of film. But these days are over. I now hit the exposure on the "nose" every time.

I decided that it was not an utterly impossible thing to learn the correct exposure. Thousands of others have accomplished this and I do not believe it has just been good luck with them. Possibly they took more pictures than I did, that gave them more practice.

So I decided to practice, but without film in the camera. My camera has an exposure guide. It must be correct. I hardly think the manufacturer would give me misleading information. In any event, I followed it on my first pictures very carefully and secured fine results. If it worked once, it should surely work again.

Like many others I am not constantly shooting pictures. I like to take the camera out and sort of look it over,



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# HERE'S HOW

## by A. S. C. Members

**STUNTS AND FIGHTS.** "I, and no doubt other readers of your magazine, would like to know how is fighting, rough-housing, and falling off horses and cars turning stunts and so much other action made?"

—H.W.V., Ft. Myers, Fla.

As a general rule, this sort of action is done by professional "stunt men," doubling for the stars. So far as I know, there is but one star who actually does all of his stunts himself: Tom Mix. While some of the other "Western" stars may do some stunts occasionally, they generally use doubles, while of course all the women use doubles. (There are one or two nifty girls who double for feminine stars, but even so most of this work is done by men.) Stunt work takes a high degree of skill, as the stunt must look effective—and the man naturally wants to break as few bones as possible. Perhaps the best description of the work, life and psychology of a stunt man is the book, "Squadron of Death," written by Dick Grace, one of the few leading stunt men still living and who, in addition to having done almost every imaginable stunt on the ground, has also purposely crashed nearly fifty airplanes before the camera. The book, and its companion, "I'm Still Alive," is published by Doubleday-Doran. The R-K-O production, "Lucky Devils" is also built around the stunt man.

The choice of camera-angles and suitable locations is equally important; this is one of the reasons why certain cinematographers specialize in the making of "Western" and stunt pictures. In a word, stunt action demands expert stunt men, properly-chosen camera-angles, absolutely ideal conditions, and unrelenting care and experience.

The same is true of fights. In order to screen well, the action must be done by men accustomed to fighting for the camera: many of the blows that do the most punishment in real fights are so short that they would not be noticed in a picture. Anyone who has been to real prize-fights undoubtedly has witnessed fights in which the actual knockout came swiftly and unexpectedly, from a blow which may have travelled but a few inches, and was so speedy as to be unnoticeable. In fights for the screen, the

blows must be slower, and show very perceptible movement, naturally, the participants "pull" their punches, so that often what appears to be a noising battle does not actually hurt the fighters at all. In such fights as require the combatants to break furniture over each others' heads, etc., what is known as "breakaway" furniture is used: this looks like the real thing, but is made of very light wood (usually yucca), and further weakened where it is to break. Being hit with a breakaway prop is only a trifle worse than being hit with a solidly-stuffed pillow. In staging fights, the experience of the cameraman is again important in selecting effective angles which make the scene look realistic without being dangerous to the combatants.

—Daniel B. Clark, A.S.C.

**CELLOPHANE FOR FILTERS.** "Is it possible to use colored cellophane for filters?"

—E.K.O., Newark, N. J.

This is advisable only in an emergency measure. The colors in commercial cellophane are selected for their decorative value, not with any reference to possible photographic value. In addition, unless you have some means of stretching the material extremely tight, you are almost certain to get irregularities—little waves, wrinkles, etc., in the cellophane. Therefore, it is not advisable to use cellophane for filtering except in an emergency: the commercial glass and gelatine filters are inexpensive, and scientifically designed for photographic use, so makeshifts are hardly worthwhile.

—George Schneidermann, A.S.C.

**STREAKS INSTEAD OF PICTURES.** "I recently got a roll of film back from the laboratory and found that instead of pictures I had simply a blurred streak, without frames or any clear image. I checked the camera, and made sure that the lens was O.K., and the shutter in time. Moreover, my actual roll of film was all right. What was the matter?"

—A.V.M., Quebec, Mich.

Probably you had loaded the camera carelessly or hurriedly, and had not gotten the film properly engaged in the claws of the intermittent. This would make the film move continuously past the aperture, and give you exactly the effect you describe, sometimes when this has happened I have known the claws to catch for a few frames, and then slip out again, giving a few acceptable frames,

and then the blur again. The only insurance against this is care in loading the camera.

—John Arnold, A.S.C.

**NIGHT EFFECTS WITH FILTER.**

"I have tried to get night effects on super-sensitive film with a 29-F Filter, but I overexposed, and got too normal shots. What exposure should I use, working in bright sunlight at the beach?"

—L.F., Beverly Hills, Calif.

Working under such conditions, your normal exposure, without a filter, would be f 22 or less. Therefore for normal shots with an F filter, you would use f 7.8, and for night effects, f 11 or a little less. If in normal work, your exposure without a filter would be f-16, your exposure with that filter would be f 5.6, and for night effects, f-8.

—Frank B. Good, A.S.C.

**TITLES WITH A MOVING BACKGROUND.**

"Is it possible to make titles in which the white letters appear against a moving background, using amateur equipment?"

—J.R., Chicago.

Yes, and it is quite easy. First, select the background you want to photograph, and take your picture. Then in a dark room wind the film back to the starting-point, after this it is quite easy to photograph your title in the usual way—and there you have your white letters against a moving background.

—Vernon Walker, A.S.C.

**COLORLESS KODACOLOR.** "In my last roll of Kodacolor, there was little color—and what there was was in the wrong place—bluish faces, pink skies, etc. What caused that?"

—J.E.G., Seattle, Wash.

Your Kodacolor filter had simply come loose in the mount, and was reversed—wrong-side-to. If you will also reverse the Kodacolor filter on your projection-lens, the colors will be as they should be. It is always a good thing to check up on your Kodacolor filter before making a shot: remember that the strips should be vertical, with the red section to your LEFT as you look at the camera. An easy way to remember this is to remember that the filter-bands should correspond to the red green and blue stripes on the Kodacolor film-carton if the carton is stood on its left side.

—Wm. Stull, A.S.C.



# ONE VETERAN SALUTES ANOTHER



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## France Invites Cinematographer Prize Winners

● The *Cine Amateur*, a French publication, has written us to invite the winners of the 1952 American Cinematographer Amateur Motion Picture Contest to enter their winning pictures in their competition.

This contest to be held in Paris this year includes all of Europe. Last year's contest was held in Holland and the following winners announced:

### Class A, 16mm Scenario:

1st Prize "Week End," by J. Lemaire and J. Valdes, France

2nd Prize "Nagaz," by J. A. V. Hemmerijck and S. Polytechniek, Belgium

3rd Prize "Night Scene," G. Collier and H. R. Hughes, England

### Class A, 16mm Documentary:

1st Prize "DeStratt," A. Come en Scheffer, Holland

2nd Prize "Behind the Scenes," J. and D. Ridley, England

3rd Prize "Reve Exotique," P. Bonvallet, France

### Class B, 9.5mm Scenario:

1st Prize "Vendetta," M. Madach, Hungary

2nd Prize "Nightmare," Rhos-on-Sea Amateur Club, North Wales

3rd Prize "Nur Ein Traum," Amator Mozgoforspekulo Egyesulete, Hungary

### Class B, 9.5mm Documentary:

1st Prize "Weekend," k.v. Vliet Hilversum, Holland

2nd Prize "Bonjour Paris," Max Naalin, France

3rd Prize "Plutvicer Seen," Dr. M. Papp, Zagreb, Jugoslavia

The first prize winners received a gold medal and a diploma, the second winners were given silver medals and a diploma and the third winners were given a diploma.

It is expected that the 1953 contests will be conducted more along the lines laid down by the American Cinematographer for its 1953 contest, giving recognition to the many different types of motion picture productions, according to Mr. Samuel T. Shaw, Jr., Manager of the Cine Amateur.

## News of Kansas Cinema Club

● The monthly gatherings of the Kansas City Cinema League are held in the offices of The J. C. Nichols Company, on the Plaza. Regular meetings are to be held every third Monday of each month.

● The following officers were elected to serve during the coming year at a recent meeting of the Kansas City Cinema League: E. M. Critchfield, President, Harland Hutchins, Vice-President, A. W. Lewis, Secretary-Treasurer.

● At a recent meeting of the Kansas City Cinema League the first formal showing was given of the film which was photographed by members last summer showing Kansas City as the visitor sees it. As yet no definite plans have been made for duplicating the film so that organizations may borrow it for showing, but the Chamber of Commerce has approved the film. Anyone wishing to learn more about the loan of this Kansas City film should write to the secretary, Mr. A. W. Lewis, 307 West 10th St., Kansas City, Mo.

● To complete the program for the evening a play by play picture of the entire Kansas University-Missouri University football game of last fall was shown by Lloyd Thompson of the F. O. Calvin Co.

## Wooley Experiments With 35mm

● Alan C. Wooley, who recently contributed an illuminating article on "Stop Motion" with the 16 mm camera, is now making experiments in the 35mm field along the same line.



## Crennan Professionalizes His Cine Kodak

● Olie V. Crennan sent us a photo so interesting that we are reproducing it herewith. It is almost self explanatory. As explained by Crennan "This device provides an infallibly accurate focus. The additional lens system in the attached visual tube synchronizes and is geared with the camera lens, so you see exactly what the camera sees. A high powered magnifier shows an upright image and enables one to obtain needle sharp definition. This device can be adapted to any Eastman Model K lens now available including telephotos and Kodacolor.

"The camera is fitted with a matte box and vignetter, as well as a set of double masks."

The camera was fitted up for Crennan by Eric M. Berndt.

## Comte De Janze Doing Color Picture

● Comte De Janze of Paris, whose picture of wild life on the African Veldt was so highly commended and for which he was given the Certificate of Merit recognition, is this year experimenting in Mergonia Color in Africa. He is attempting to bring that fascinating corner of the world to the screen in its true colors.

## Frisco Club Shooting Cable Cars

● As a club activity the Cinema Club of San Francisco has been making pictures of the San Francisco Cable Cars. At their recent meeting some of the shots taken by the members were shown with the idea of developing ideas for additional series to complete this interesting picture. Also those of a mechanical turn of mind demonstrated a few scenes in which they used the cellulose gum for creation of wipe-offs.

G. A. Young, president of the club, is planning a meeting for the showing of the Prize Winning pictures as selected in the international contest conducted by this magazine last year.

## Voss in Florida Everglades

● H. W. Voss who was given a Certificate of Award of the first class for his Kodacolor try in last year's amateur competition is active both with Kodacolor and black and white in the Everglades of Florida. Voss is also experimenting with tints and tones on some new black and white 16 mm pictures he is shooting.

## Greenbrier Club Doing Mystery Play

● Evidently the Greenbrier Club is following its first love in the production of a new picture. The mystery play is "The Thing", for this summer's production schedule. Hal Money, secretary, is rounding out a story of a movie within a movie with dark hooded villains who will steal the "proud beauty" and even the camera and camera man. Now the mystery is, without camera and cameraman, how is Money going to finish his picture?

## 900 View Prize Pictures In Kansas City

An audience that was estimated to number more than 900 gathered at the invitation of the Kansas City Cinema League in the Edison Memorial Hall on Monday night, April 18th to view the American Cinematographer Prize Winning pictures of 1932.

These prize winning pictures which consist of "Terzan Jr." first winner; "Lullaby," second winner; "I'd Be Delighted To," third winner; "Early Summer," winner of Photographic Prize and "Finney Fable," winner of prize for the "Ideal Home Movie" compose the list of pictures included among those for a complete program being loaned to Amateur Clubs by this magazine.

The Kansas City Club realizing the importance of these subjects in corraling new members made their showing a big event. They publicized it in newspapers, through the dealers and announcements to their own friends with

the result that their two weeks' campaign netted them an attendance of better than 900 people for this showing.

Those clubs interested in showing these pictures under similar circumstances may secure them by writing this magazine for date.

### L. A. Cine Club In Full Swing

Activities in the Los Angeles Amateur Cine Club have been bringing forth goodly numbers to every meeting. The meetings have been planned with a lot of thought and the result is that a great deal of entertainment and things of an educational nature have been given the members.

The club this year is under the guidance of C. E. Memory as president, Fred Champion, vice-president; Church Anderson, Secretary.

Wayne H. Fisher, president last year, is in charge of programs for 1933. W. R. Madden directs the contests, F. B. Skeels looks after the desires of membership and publicity. The Technical section is guided by L. H. Bailey, M.D., while the social events and receptions are the duty of Perry F. Backus. Public Relations are the duty of E. S. Bogardus.

The April meeting was given at the famous Carthay Circle theatre where Joe Hubbell, Pacific Coast Manager of Fox Movietone News, took 35mm pictures of the event and showed them the same night to the gathering. Motion Picture Diverters and other professionals addressed the gathering. The meeting was sponsored by C. H. Rutke of the Victor Animatograph Company.

The March meeting will be given in the 400 seat auditorium of J. W. Robinson's, one of Los Angeles leading department stores.

### Club Gives Prizes for Best Home Movie

With the policy of giving prizes each month for the best amateur pictures offered for the month's meeting, the Los Angeles Cine Club has designated a certain type of picture for one of their forthcoming meetings. This program will be confined to the Home Movie class, pictures made about the home of the family and children. "Finney Fable" which was given the prize for the Ideal Home Movie in last year's contest will be offered at this meeting as a criterion of what the ideal home movie should contain.

### AMATEURS NOTE!

If you are not familiar with conditions surrounding 1933 Competition, write for information. All entries must be in not later than October 30, 1933. These pictures will be judged by the American Society of Cinematographers, "Camera Masters of the World."

### Amateur Photographs Many Famous Personalities

Nel P. Home of Belleville, N. J. has photographed two hundred and sixty internationally famous folk in 16mm. His camera shows no discrimination. He has such famous men as ex-President Hoover, Sir Thomas Lipton, Gene Tunney, John D. Rockefeller, Professor Einstein, Count Von Luckner, Admiral Byrd and of course all those others to complete a total of two hundred and sixty. He is completing a historic subject of famous men.

### Hartman Sends Picture East for Showing

Rudolph R. Hartman entry in the 1932 Amateur Motion Picture contest conducted by this magazine, "Romance of a Femme Nocturne," the story of the bee, has had a request from eastern authorities for the loan of this picture for a showing before scientific societies.

Tatsuki Okamoto, winner of Second Prize for "Lullaby" and Photographic Prize for "Early Summer."



### Europe Will Again Enter Competition

It is evident from the interest being evinced in the 1933 American Cinematographer Competition by 16mm. users in Europe that there will be a goodly representation from across the Atlantic again this year. Ruth Rodger of Manchester, England again indicated her intention to making an entry. In France, the Cine Amateur, and all of its readers are looking forward with great interest to the 1933 competition. Holland also shows a keen interest and many entries are expected from the land of the dykes.

### A. R. Powell Doing Nature Study

Again Arthur R. Powell of Axtel, Cal. is getting "close to nature" for his 1933 16mm picture. He was awarded the Certificate of Merit in the 1932 contest for his very fine picture of the "Silkworm." This picture has been very busy ever since with many educational organizations in California and throughout the United States.

### Wayne Fisher Sticks To the Air

Wayne Fisher of Los Angeles is continually adding to his fine collection of aerial pictures. His most recent effort was awarded one of the monthly prizes given by the Los Angeles Cine Club.

## PRIZE WINNERS COMING TO HOLLYWOOD

Those prize winners of our 1933 competition for Amateur motion picture makers who might come to Hollywood anytime during the year following the closing of the competition will be given an opportunity to spend some time in one or the other of the big studios to watch the professional at work.

Recently Palmer and Page who won the 1932 contest were shown how process photography was made . . . how cartoons were made when they spent a week here in Hollywood.

Palmer and Page were interested in that phase of production. Perhaps some of the winners of the 1933 competition may be interested in some other type of production. We will give them the opportunity to see that kind of production made if they should be visiting Southern California.

You know the 1933 competition which closes on October 31 (all entries must be received by us on that date), covers many more phases of production. It will be wider in its recognition. Recognition will be given for at least twelve different types of production. More, if the entries indicate we have overlooked anything.

Now is the time to get that entry started. There are only six months left in which to make it. The only requirement is that you neither be a professional nor have any professional help. The picture can be on either 16 mm., 9½ mm. or 8 mm. There is no restriction as to length.

Use the attached coupon to indicate that you will make an entry; if possible, indicate the type of picture. It is not necessary that you be a subscriber.

Awards in the form of medallions or certificates of merit will be given for PHOTOGRAPHY, Kodacolor, Home Movie, Production, Scenic, Animated Cartoon, News Reel, Nature Study, Medical, Technical Process, Educational, Travel Film, Aerial Photography. These awards will be the greatest honor you can achieve. They will be given by the American Society of Cinematographers.

I intend to have an entry in your 1933 Amateur Competition. I will enter under the following classification:

Mention here whether for Photography, Scenic, Travel etc., as listed above, or any new classification you feel your picture will fit into.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

## YOU ARE NOT AN AMATEUR!

You are a CINEPHOTOGRAPHER CINEGRAPHER or CINEGRAPHIST or have you a better name

THE AMERICAN CINEMATOGRAPHER wants a better name for the Amateur Motion Picture Maker. We feel that the type of substandard film user who is reading the American Cinematographer is deserving of a better name. To us the word Amateur when used in connection with any of the arts implies some one who is a sort of bungler . . . at least rather awkward. From the fine specimen of pictures we see from the hobby-ists in the motion picture field, we know they are far from awkward. We know they have advanced far enough in the art to be given a more dignified name.

We have suggested three names at the top of this page. Which do you prefer? Or have you a better name? Use the coupon at the bottom of this page giving us your preference. Or just drop us a post card. Perhaps one of you has a much better name.

The word Cine is becoming more and more associated with substandard films. . . . Slowly it is meaning 16 mm. and other small sized film.

It is for that reason we have suggested the word Cine as the prefix to the names we have suggested. They are given you merely as a starter. Perhaps you know of a better name. We want to get away from using the word Amateur in our publication. We feel there is a sort of stigma to it in connection with the intelligent user of the Cine Camera. . . . he has reached out further. . . . he is no longer the amateur that the popular conception of that word implies. Possibly according to Webster. . . but not in reality. Let's have a new name for the Home Motion Picture Maker. . . . Shall it be CINEPHOTOGRAPHER CINEGRAPHER CINEGRAPHIST? You decide!

I prefer the name

for the user of Cine cameras

Name

Street

City

# Tinting and Toning 16 mm. Film

Continued from Page 19



## KINO-PLASMAT for COLOR

Cherry and Macc—the pale green and blue tints—give the colors and tones of the colorized scene as best identified by the Kino-Plasmat 1:5 whose superb chromatic correction enhances the quality of the Movie Makers' color work. Lens complete with Kodachrome Filter, etc. \$75  
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chamas should be of good quality, and soft, before using it the first time they should be carefully washed and rinsed, and at all times it should be thoroughly wet and wrung out before using.

In all of the tinting and toning processes, the best guide is visual inspection; no definite rules for the length of application can be laid down, for this will depend upon many factors—the temperature, type and condition of the film, the exposure, and so on. When using the drum system, an ordinary fountain-pen flashlight makes a most convenient inspection light.

For best results, the film should be fresh, and projected only a few times—or not at all.

### Coloring Cise Film

As has already been stated, the Burroughs Wellcome "Tabloid" toners and "Solid" stains give satisfactory results, and are simple to use. These solutions come in tablet form, and need only be mixed with the proper amount of water in order to compound the solutions. The directions for use are printed on the boxes in most cases, nothing is said about their use for coloring cine film, but the instructions for toning lantern-slide plates give the proper strength for cine use. In using the "Leca" drum I have found that a 4x6 inch tray will suit perfectly, and the best results are had by using six ounces or more of the solution. With most trays, it will be necessary to raise the tray slightly in order that the drum may dip well into the relatively small amount of the solution used. I have found a strip of wallboard the width of the tray, to be excellent for this.

### Getting Desired Colors

The "Solid" red, green and yellow stains give very nice fine effects. They are mixed by dissolving one tablet in each ounce of water, and tinting until the desired color has been attained. For stronger colors, use less water, or immerse longer. The final washing required is brief—fifteen or twenty seconds, as a rule. The red stain gives results that are very deceptive, as the film must be toned quite a bit darker than seems necessary to visual inspection, as the projection tends to lighten it. The same is, in a way, true of the green stain, which gives an effect which is very attractive visually, but not so satisfying when projected. The yellow stain requires an even darker coloring, to be at all effective.

The "Tabloid" blue toner gives a very attractive blue tone. While it employs a single solution, it is made by dissolving two tablets separately, and then mixing

the resulting solutions. This combined solution is somewhat greenish, and gives a yellowish tone which changes to a permanent blue upon washing. In certain waters, however, the presence of impurities may make this blue tone wash out, but it may be restored by the application of a very weak solution of hydrochloric acid. A short toning usually gives a better color than a long toning, and leaves the high-lights clearer. As this solution somewhat intensifies the image, it is well to start with a rather light print.

### Green Tone

The "Tabloid" green toner is compounded and applied in a similar manner; it gives a somewhat bluish tone, which changes to green with washing. Longer toning gives a brighter green, while longer washing gives a yellower green. This solution does not intensify the image to any marked degree.

The "Tabloid" sepia toning compound requires the use of two separate solutions: the bleaching solution and the sulphiding (or toning) solution. The necessary tablets for these two solutions are supplied together, and must be used in the proportion of one tablet to each two ounces of water. In sepia toning, it is particularly essential that the film be absolutely free of any trace of hypo, so—even though the laboratories processing 16 mm. film generally provide ample washing—it is best to give your film an unusually long and thorough washing. After washing, the film is immersed in the bleaching bath until it has been bleached to a light, creamy white color. Then rise in running water, and immerse in the sulphiding or toning bath, and tone until the desired color has been attained. Do not make the mistake of removing the film too soon from the toning bath, also, remember that for the best results you must have properly-exposed film, overexposed scenes give a weak, yellow-brown tone rather than a true sepia. This solution also serves to intensify the image noticeably and may considerably improve overexposed shots. If necessary the tone can be improved by treating the film (after toning) with the "Tabloid" brown toner.

### Most Beautiful Tones

Probably the most beautiful tones, however, are those produced by copper ferrocyanide toning with the "Tabloid" Copper ferrocyanide toner. This bath is a single-solution affair, compounded by dissolving one tablet in each ounce of water. The preliminary rinsing, post-toning washing, and drying are the same as for the other toning processes, but

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**Page 20**

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the actual toning takes much longer, and gives a greater variety of tones. Depending entirely upon the length of the toning, one may obtain a wide range of tones—black, brown, purple and red. The latter requires the longest toning, some scenes that I have toned requiring fifteen or twenty minutes. The copper ferrocyanide solution acts very strongly as a reducing agent, so it is advisable to start with very vigorous, contrasty films. Because of this action, too, it is surprisingly useful as a means of salvaging underexposed scenes.

#### Filtering for Color

Obviously, with certain of these solutions, the nature of the image dictates the type of tone obtained, in some cases it might even be well to expose and filter your scenes with special reference to the toning process to be used (especially for copper ferrocyanide toning). There is a little trick to getting perfectly uniform results, and the film must be dried uniformly and carefully squeezed if water blemishes are to be avoided, but these things are not difficult. In the main, tinting and toning 16 mm. films by these methods is easy—and incredibly fascinating. Once you have mastered these simple processes, there is an almost infinite range of dyetones and tints with which to experiment. Detailed information as to these processes is included in the appendices of both volumes of the CINEMATOGRAPHIC ANNUAL, and also in the Eastman Kodak Company's book, "Tinting and Toning Eastman Motion Picture Film." In this latter, the publishers also provide several score samples of the different tones, tints, and tone-tint combinations, which give one a glimpse of the possibilities of these coloring processes. Truly, they are the next-best thing to natural-color films—and in some casts, even more pleasing.

#### Motigraphing the Jig-Saw Puzzle

Continued from Page 22  
ship readily into position. The former were put into place (in the taking actually taken out of place) across the already completed portion of the picture. Care was taken not to jar the whole set-up during the performance and to take all hands out of range of the camera before the button was pushed for the taking of a picture. About 3½ feet of film was used in this part of the procedure.

When the film was developed, it was turned end for end and spliced on the beginning of the original picture of the four children at the table, the last frame of the new film beginning exactly the same as the first frame of the original film.

When the completed film is run, the screen starts black, several prints start going through gyrations, are assembled in their correct positions; one by one



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the others come into place until the picture is completely assembled. As the last piece achieves its place, the whole immediately becomes animated, the children going on with their meal. With the shading and the position of the puzzle film accurately matching those of the original film, the only visible break is the disappearance of the jagged puzzle lines and the beginning of animation.

### I Practice Correct Exposure

*Continued from Page 26*

I just couldn't afford an exposure meter. I have many friends who have them and use them to mighty fine advantage. In fact, their photography has improved tremendously since they made their meter a part of their equipment. But in my case I couldn't make the investment at the time I needed it, so I proceeded to learn correct exposure in the only way that came to my mind. It has worked out mighty well for me.

### Commends 1933 Plan of Awards

• I. O. Levy, member of the Los Angeles Cine Club and one of the entrants in the 1932 American Cinematographer Competition, commends the method to be pursued by the American Cinematographer in their 1933 method of conducting the contest and giving awards. In a recent statement, Mr. Levy said: "It is my feeling that the spirit among amateurs should be the joy of achievement and not for any monetary or valuable acquisition, by reason of having reached a higher point in the art in friendly competition."

Levy specializes in landscapes featuring trees, mountains, etc. It is his contention that he gets more of a "kick" in making a successful picture as to beauty and composition along these lines than with any other subject.

### Palmer Trying Sound

• William Palmer who with Ernest Page won first prize for the American Cinematographer 1932 Amateur contest is turning his activities toward the creation of sound equipment for his own pleasure. His experiments are in line with its use on 16 mm. film.

### Skeele Demonstrates Fine News Sense

• Franklin B. Skeele showed his newspaper training in his selection of scenes for his newsreel of the recent Southern California earthquake. Skeele, a member of the Los Angeles Cine Club and also on the *Illustrated Daily News*, a Los Angeles daily paper, used his press credentials to take him into the most interesting sections of the quake zone to secure scenes for his picture of this event.

### When Amateur Turns Professional

*Continued from Page 19*

ing considerable footage in newly opened areas of the Mount Rainier National Park.

Mt. Rainier and its surroundings afford literally hundreds of scenic views, each one so strikingly beautiful that the camera enthusiasts accept the challenge to record them on film, that it really is a challenge to skill those who have taken movies at high altitudes will agree.

That Joe Yolo has been successful in his work of photographing parts of this "Mountain that was God" is attested by the fact that he was selected to go again into this mountain country during the dead of winter, and over ten to thirty feet of snow, in order that broadside-hikers like you and me may see something new in winter pictures, the settings for which are actually seen by few men.

### Advance Preparation

Winter pictures on the slopes of great Mt. Rainier are not successfully secured without much advance preparation. Yolo started to prepare for this trip last summer by rebuilding an Eyemo camera into a compact, housed in and hooded camera which could be packed on his back, stand much abuse and still be easy to bring any one of its three lenses into instant action either by hand or on the specially constructed tripod. The tripod as well as the large view finder attached to the side of the camera had to be light to pack yet very strong and rigid in order to stand steady against the terrific winds which almost constantly blow at extremely high altitudes.

Miles up in this mountain region is a cache of food, bedding and film taken there last October before the big snow so that Joe when he starts in some time in February, will only pack fifty three pounds of camera and equipment besides his snow shoes and skis.

Preparation and perseverance are needed for success in any line of endeavor, for Joe Yolo these attributes have made possible the transition from Amateur to Professional yet more than ever for him motion picture work is a hobby.

### Kodachrome Comes Indoor

*Continued from Page 23*

hold several photoflood bulbs (six or eight to the unit, even). Such units are most effective if they are slightly deeper than the length of a bulb and its socket, so that spilled light is reduced to a minimum and painted white or silvered, to act as a reflector. Reflectors, as described by Charles Clarke A.S.C. last month, are exceptionally useful, especially when you have only one or two lights available.

The matter of exposure will pretty well take care of itself, I am quite sure that there is small danger of overexposure, at any rate! The Eastman Kodak Co. have published the following exposure-charts for use with their new 55

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Kodaflectors, which will serve as a guide when other units or larger areas are used.

| No. lamps | Distance from lamp to subject | Camera speed |
|-----------|-------------------------------|--------------|
| 2         | 1½ feet                       | Normal       |
| 2         | 2½ feet                       | Half         |
| 3         | 2 feet                        | Normal       |
| 3         | 3½ feet                       | Half         |
| 4         | 2½ feet                       | Normal       |
| 4         | 4 feet                        | Half         |

Since the efficiency of the different types of reflector-units varies considerably, this can, of course, be taken only as a rough guide, the most important thing to remember is that if you want to cover a larger area, you will naturally have to move your lights back farther, so that they will not be included in the picture—and when you do this, you lessen the intensity of the illumination on the subject in the inverse square of the distance the lights are moved; therefore, you will need either more lights, or stronger ones.

The choice of subjects for any color work is important, of course, and nowhere more so than in such work as this. If you are in doubt as to whether to shoot a scene in black-and-white or in color, try first to visualize it *in color*, its color, if you can—and it is still pleasing—the color is unimportant, if you can't, the chances are that it *needs* the color—so shoot it in color!

## San Francisco Cine Club Elects Officers

● OFFICERS recently elected by the Cinema Club of San Francisco to serve for the year are: G. A. Young, president; A. W. Kerrigan, vice-president; K. G. Stephens, secretary; Herbert Luhn, treasurer and A. J. Holton, program chairman. The board of directors of this club consists of the officers and Fred W. Kolb and Fred Dohrmann.

This club has just completed a contest among their members for pictures of unlimited length made during 1932. The first award placed the winner's name on a silver plaque donated by Fred Dohrmann. This honor was won by K. G. Stephens for "Beauty Sports," an interesting picture of the seashore.

Honorable mention was won by Fred W. Kolb, Clifford Nelson and J. W. Holmes.

## New Camera Carriage Saves Time

Continued from Page 8

new camera-carriage is equally advantageous. It is, in the first place, surprisingly rigid, moreover, its dimensions are such as to permit lights to be placed very close to its sides, or to permit the device to be used in corners where a tripod would be impractical. Moreover, the crane adjustment permits one to change the height of the camera instantly, without requiring the services of half-a-dozen stage hands to shift the camera, or to a baby tripod. More-

over, these changes in height can be made without moving the carriage from its original position, and they can be changes of either several feet or a mere fraction of an inch. In a word, when used as a semi-permanent camera-stand, this device reduces the time and effort required to change camera set-ups, minimizes the chance of error in these changes, and increases the efficiency of the company to a marked degree.

—When night photography was limited to good flashlight pictures!

—When precision lenses were seen only in the laboratories of scientists!



MODEL D

—When telephoto lenses were available only to a few!

—When a camera fan, to be "up-to-date," needed a warehouse of expensive equipment!

The LEICA Camera has made these all things of the past!

## How LEICA Has Created a New Era in Photography

LEICA photography differs from old-fashioned photographic conventionalism as much as the modern automobile differs from the horse and buggy. The LEICA Camera offers those picture-taking enthusiasts speed, accuracy, and versatility than has ever before been thought possible. It has blasted many trails, broken many precedents. It was the first precision camera to be built small enough to carry in the pocket. It was the first precision camera to simplify all controls for greater speed and certainty of operation. It was the first precision camera to adapt lenses of microscopic quality



to photographer. It was the first pocket precision camera designed with interchangeable lenses, including telephoto and wide angle lenses, and high speed lenses for indoor and night photography. It was the first pocket camera with a built-in range-finder coupled with lens giving correct focus instantly without guesswork. It was the first pocket camera equipped with a focal plane shutter of standard cloth construction, eliminating danger of unwanted reflections at high speeds. It was the first "self" camera to use camera film, giving the photographer the advantage of the very latest refinements in camera film manufacture. And the makers of the LEICA Camera were the first to offer a complete line of accessories and attachments (now over 300!) thus opening the entire field of modern photographic art to every LEICA owner at a great saving in cost.

The LEICA Camera takes up to 16 pictures on a single roll of film. Shutter speeds, giving perfect enlargement up to 12 x 16 inches, shutter speeds 1/3000 to 1/1000 seconds including time exposures.

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The LEICA purchaser receives a 2 year guarantee with camera. LEICA PHOTOGRAPHY, an interesting illustrated monthly, is sent free to every LEICA owner. LEICA Camera Clubs now organized in many cities throughout the country help the LEICA owner to get the most out of his camera. Lectures and demonstrations by leading experts are given before these clubs.

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over, these changes in height can be made without moving the carriage from its original position, and they can be changes of either several feet or a mere fraction of an inch. In a word, when used as a semi-permanent camera-stand, this device reduces the time and effort required to change camera set-ups, minimizes the chance of error in these changes, and increases the efficiency of the company to a marked degree. The best proof of the value of this new device is the fact that Godfrey Fisher, Camera Executive at the Fox Studio, has authorized the construction of a number

of these camera-carriages and has stated that the record of the present experimental model has shown that these devices will rapidly pay for themselves in the increased efficiency of the camera-carriage using them. "We have conclusive evidence," he has said, "that these new camera-carriages will permit our camera crews to turn out more scenes per day—and better ones—with a smaller expenditure of energy, greater precision, and no increase in the stage-crew required. It is clearly a step toward the goal we are all striving for—better pictures at lower costs."

# Some Don't, But I Like Light Sets

Continued from Page 15

thing which can logically be used to cast either shadow or light patterns on these walls. Very frequently you will find a prop—a flower, a chair, a statuette, or the like—which can be utilized for this shadow-casting. Similarly, you will usually find lamps, windows, doors, etc., which can be equally useful for casting or legitimizing high-lights. If you balance your lighting properly, you can get beautiful, luminous shadows and fine, soft high-lights, with a delightful range of half-tones between. If you still find yourself with embarrassing expanses of blank whiteness, you can then fill these in with a

range of half-tones, avoiding wherever possible obvious "early Vitaphone" spots of light.

## Art Director Helps

The art-director can, of course, be of tremendous assistance to you in this, not alone in putting in these props, but in giving you the windows and doors which you can use as the ascertainable sources of your decorative lighting effects. He can also give you pleasing contours to break up the flatness of the walls, and give you opportunities for more decorative half-tones and shadows.

Light-toned sets, I have found, are ideal for such treatment, for the lighter backgrounds take the shadows far more easily than do darker walls. You don't have to use nearly so much light to produce these effects; you don't get heavy, sooty shadows, and you can easily get a far wider range of half-tones than is possible on dark, or even neutral-toned settings. After all, this is only natural, for we are dealing with reflected light—and light-colored surfaces are the best reflectors. Just notice, for instance, the difference in the shadow of your hand when you hold it over some dark surface such as a table-top, and when you hold it over a light surface, like a sheet of paper!

mainly accentuations of your set-lighting to the degree where it becomes more immediately noticeable, and these light-colored sets are a perfect canvas upon which to paint light-effects. In fact I have found that such scenes are even more effective when done on light sets than if they were done on more conventional backgrounds.

## Laboratory Side

Of course, the ultimate success of any cinematography rests with the competence of the laboratory; and nowhere is this more true than in scenes made on light sets. As I have tried to point out, delicacy must be the keynote of a cinematographer's work on such sets—soft, luminous shadows; soft, clear high-lights, and an extremely wide range of delicate, soft half-tones in between. If the laboratory will and can handle the film properly, you will be able to get beautiful results; if they botch the job, they can easily block out your high-lights, turn your shadows into patches of soot, and erase half of your intermediate tones. If you can't have confidence in your laboratory, by all means avoid light sets; if you can trust it, light sets offer you new opportunities for beautiful and distinctive camerawork.

As I remarked at the beginning, I like light sets!

## Mobile Camera-Carriages and Cranes

Continued from Page 13

Aside from minor differences in the undercarriage, the chief differences between the M-G-M rotamulator and the Bell and Howell version lie in the provisions for panning and tilting motion. In the latter, the tilt is operated by a hand-lever, and works against hydraulic resistance, while the panning movement is supplied by the feet of the operator, pushing on a fixed, circular track around the base of the device.

## Reduced Model

The Paramount "Baby Boom" is practically a reduced-scale model of their larger crane. While it is somewhat larger than the rotamulator, its range of adjustment is the same, except that the crane construction naturally permits the camera to be lowered to the actual floor-level, or lower. It uses relatively large wheels in its undercarriage, also. It is likewise interesting to note that this device has been designed so that a ten-foot extension can be fitted to the crane-arm without requiring additional counterbalancing.

## Minimum Space

As is to be expected, the proponents of the crane and rotamulator designs differ somewhat in their concepts of the ideal small camera-carriage. The impartial observer can, however, easily see that they are agreed on the more essen-

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tial points, which are that such a device should take up the absolute minimum of floor-space, give a range of camera-height between the height permitted by a "high-hat" and (at least) seven or eight feet, permit panoramic, tilting, and vertical movement while the carriage is being moved horizontally; be manually operable with a minimum crew, and sufficiently steady to permit the device to be used in place of an ordinary tripod as well as for travelling-shots.

#### Cushioning Effect

In actual operation, it has been found that, contrary to the natural expectation, solid tires are vastly preferable to any pneumatic type, for if the latter are sufficiently resilient to give any noticeable cushioning effect, this very factor introduces an objectionable lateral weave or unsteadiness. For similar reasons, relatively large wheels are usually employed. Experience has also proved that no matter how carefully the rolling-gear of the undercarriage may be designed, the best moving shots are invariably had only after the preparation of a suitable track upon which the carriage is rolled. And most conclusively of all, experience has proved that these devices, through the time and labor they save quite as much as through the greater technical and artistic freedom given to cinematographers and directors, very speedily offset the initial expense of their design and construction. The indications are, therefore, that the future will see a far greater use of these small, mobile camera-carriages, together with intermediary and large cranes and booms—and a steady reduction of the need for conventional tripods for studio use.

#### American Photography Issues Annual

IN ITS usual fine style "American Photography" has issued its 1933 Annual on photography.

While the major portion of this comprehensive book has been given over to still photography in its various branches, still a half dozen articles have been designed for the amateur cinematographer.

Whether interested in either still or motion photography, there is much in both types of articles in this annual that will be of great interest to all who have to do with photography whether as a business or a hobby.

For the Amateur Cinematographer such things as light, make-up, and titles are touched upon in an authoritative way. R. Fawn Mitchell of the Bell & Howell Company authors an article in the Annual on "New Developments in the Amateur Cine Field."

Famous as this book is for its reproduction of fine portraits and still pictures, this year's edition seems to be unusually rich in fine specimens.



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## Wheels of Industry

Continued from Page 10

Victor 10E Projector which is equipped with a variable resistance rheostat in the base for reducing A. C. or D. C. of up to 250 Volts to the 100 Volt rating of lamp and motor. The lamp provided is the new 500 Watt-100 Volt Sylvania Filament. The rheostat of the 10E Projector is equipped with a separate motor for forced cooling of the resistance wires. A built-in ammeter indicates when necessary resistance has been obtained.

### New Reel Tank

● A NEW model of the Reel Tank is announced by E. Leitz, Inc. The former model was constructed of metal metal and the reel of bakelite. The new model is exactly the same as the older Reel, except that the tank is now made entirely from bakelite, as is also the reel. The Reel has been a favorite of many LEICA owners and motion picture workers for short test strips. Now two tanks are available, the Reel and the Conex.

## George Schneidermann, A.S.C., On "Pilgrimage"

● George Schneidermann, Treasurer of the American Society of Cinematographers, has been assigned the First Cinematographer's berth on the Fox production, "Pilgrimage." This assignment reunites the team of Cinematographer Schneidermann and Director John Ford, who made film history some years ago with "The Iron Horse."

## Tom Terriss Abroad for New "Vagabond Adventures"

● Tom Terriss, producer of the Vagabond Adventure shorts, sailed from New York recently to make a new series of scenes in France, Spain and North Africa. He was accompanied by Arthur Harnier, producer, Guy Rennie, actor, and Lucien Tanguy, cinematographer.

## A S C Re-elects John Arnold

Continued from Page 7

ENTERTAINMENT COMMITTEE—John W. Boyle, Chairman, Frank B. Good, Charles B. Lang, Jr., Vernon Walker, and Allen Wyckoff.

As will be noticed, these committees have been somewhat enlarged—especially the Research Committee—presaging greatly increased activity in every phase of the Society's manifold endeavors. As in the past, the Society's Testing Committee, which tests the various apparatus and equipment submitted for the Society's testing and approval, will have no fixed membership, but will be appointed from time to time by the President, and chosen with especial reference to the requirements of the individual apparatus to be tested. It will work in close cooperation with the members of the Research Committee.

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York. Swartz's Photo Service Shop, 278 W. Market St.

#### RHODE ISLAND

Providence. Thomas N. Simpson, Broadway & Exchange Sts.  
Providence & P. Anthony, Inc., 178 Angell St.  
Providence & Williams, Inc., 41 Exchange St.  
Wasscott. Slide & Balsam Co., 95-99 Empire St.

#### TENNISSEE

Knoxville. Southern Pictures Corp.  
Knoxville. Ben Thompson Co., 415 W. Church St.  
Memphis. Memphis Photo Supply Co., 122 Union Ave.  
Nashville. Geo. C. Dary Co., 420 Union St.

#### TEXAS

Abilene. W. C. Cobby, 249 Pine St.  
Dallas. Jamison Film Laboratories, 2212 Live Oak St.  
E. G. Marlow Co., 1610 Main St.  
Fort Worth. The Camera Shop, Inc., 118 W. Sixth St.  
Char. G. Lord, Perish Co., 704 Main St.  
Houston. Star Elec. & Eng. Co., Inc., 613 Green St.  
San Antonio. Fox Co., 209 Alamo Plaza.

#### UTAH

Salt Lake City. Eastman Kodak Stores, Inc., 315 S. Main St.

#### VIRGINIA

Richmond. G. L. Hall Optical Co., 257 Grady St.  
Richmond. G. L. Hall Optical Co., 418 E. Grace St.

#### VERMONT

Burlington. G. W. La Pierre's, 71 Church St.

#### WASHINGTON

Bellevue. Clyde Banks, 119 W. Holly St.

**Fullman** - Graves Studio  
**Seattle** - Anderson Supply Co., 111 Cherry St.  
**Eastman Kodak Stores, Inc.**, 1415 - 4th Ave.  
**Lowman** & Harland Co., 1514 - 3rd Ave.  
**Sokolow** - John W. Graham & Co. Dept. C 101  
 Sprague Ave.  
**Torrain** - Drug Co., Howard & Riverside Ave.  
**Tucson** - Eastman Kodak Stores, Inc. 910  
 Broadway  
**Walla Walla** - Book Nook Drug & Stationery  
 Store

**WEST VIRGINIA**  
**Wheeling** - Twelfth St. Carpet, 81 - 12th St.

**WISCONSIN**  
**Fond du Lac** - Huber Bros., 36 S. Main St.  
**La Crosse** - Main Photo Service, 373 Main St.  
**Madison** - Photoart House, 212 State St.  
**Milwaukee** - Eastman Kodak Stores, Inc., 337  
 N. Milwaukee St.  
**Oshkosh** - Main, Wisconsin Ave. & 4th St.  
**Waukegan** - E. Brown, 327 W. National Ave.  
**Winnetka** - E. Wisconsin & N. Flanking-  
 ton  
**Photoart House** - The, 226 West Wells St.  
**Phillips** - Jakubowski, 152 N. Lake Ave.  
 Store  
**Racine** - Photo-Crafts Shop, 520 College Ave.

**AUSTRALIA**  
**Melbourne** - McGills Agency, 179-218 Eliza  
 both St.

**CANADA**  
**Calgary** - International Book Co., 269 North  
 Wing Han Road

**HAWAII**  
**Honolulu** - Eastman Kodak Stores, 1059 Fort  
 St.

**INDIA**  
**Bombay** - Continental Photo Stores, 255 Haverly  
 Road  
**P. C. Ramia Sons**, Albert Bldgs., Haverly  
 Road  
**Calcutta** - Photographic Stores & Agency Co.,  
 154 Chatterjee St.  
**M. S. Shree**, 5/1 Chatterjee St.  
**Lucknow** - Lucknow Commercial Co., 25 Anand-  
 dal Park

**MEXICO**  
**American Photo Supply Co. S.A.**, Av. P. 3,  
 Mexico, 43 Mexico DF

## New Camera Executive at Universal

● F. S. Campbell, formerly head of the camera department of the Pathe Studio, has been signed by Universal for the post of Camera Executive, succeeding Charles R. Clouser.

## Ray Jones Heads Fox Still Department

● Ray Jones, formerly with Universal, has been placed in charge of the still department at the Fox Studio. Otto Dyer, long head of Paramount's still section, has also joined Fox.

## Milner Finishes "Song of Songs"

● Victor Milner, A.S.C., has finished the camerawork on Paramount's "Song of Songs," starring Marlene Dietrich, and is enjoying a brief rest before taking on another assignment.

## Wm. Rees, A.S.C., Acquires Van Rossem Studio

● William A. Rees, A.S.C., recently bought the Van Rossem studio, a commercial photographic establishment formerly operated by Walter Van Rossem. The studio will hence forth be known as the Van Rossem-Rees studio.

## Len Roos, A.S.C.—Scenarist

● According to information just released by Universal Pictures, Len H. Roos, A.S.C., is credited as co-author of Universal's forthcoming release, "Nature in the Raw," which he and Chester Bennett are producing in the Malay Peninsula. The energetic Mr. Roos is also photographing the production.

## Elmer Dyer Flies to Denver

● In search of mountainous backgrounds for MGM's "Night Flight," Elmer Dyer, A.S.C., recently flew to Denver and back. The A.S.C. official, piloted by Paul Mantz, spent some time in Colorado photographing the Rocky Mountains from above.

## Consolidated Plans More Coast Activity

● According to plans of George Yates, manager of Consolidated's west coast plant, more of the work of this corporation is contemplated on the coast in its many large plants than is being done at the present time.

Yates anticipates making a trip east with the view of swinging a large portion of the organization's printing work to the coast.

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**WANTED**—Bell & Howell complete with 3 lenses 2 tripod cases and motor. Also DeVry complete without lenses. Underwater Buoy for DeVry. Address P. O. Box 844, Hollywood Calif.

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